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ABSTRACT

The curriculum for gifted students in grades kindergarten through 5 in Long Branch (New Jersey) is both accelerated and enriched using the basic district curriculum to ensure skill mastery and modified with additional materials and instructional strategies including: compacting of curriculum through mastery testing; increased opportunities for self-directed learning; inquiry teaching; the use of field trips and community resources; discussion and debate techniques; and use of questioning techniques and Bloom's Taxonomy exercises. Although the major areas of language arts, mathematics, and computers are noted, most of the guide focuses on goals, objectives, activities, and resources for each grade level in the areas of science, economics, inquiry process, and creative writing. The curriculum identifies goals, objectives, and concepts at each grade level and presents lessons in a matrix form listing objectives, procedures, and materials. Appended are various student self-evaluation forms, teacher evaluation forms, and resource lists. Also included in this package is a handbook for parents outlining student identification procedures and program characteristics; and a detailed program description and an evaluation report which finds the program highly effective. Various sample parent, teacher, and student survey and observation forms are appended to the evaluation. (DB)

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LONG BRANCH PUBLIC SCHOOLS
LONG BRANCH, NEW JERSEY

1989

ELEMENTARY GIFTED CURRICULUM GUIDE
GRADES K - 5

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INSTRUCTIONAL OBJECTIVES

The Long Branch School System seeks to provide its gifted elementary students with a carefully planned program by establishing a framework of educational experiences which are differentiated from those already presented in the regular classroom and offering a variety of subject areas. At the same time, students are encouraged to develop their present interests and achieve the benefits of their innate abilities. The basic goals which are interwoven throughout each curriculum guide are:

- -enhancing cognitive skills
- -developing the higher level thinking processes of application, analysis, synthesis and evaluation
- -engaging the student in self-directed independent work
- -providing an enriched learning environment appropriate to the needs of high potential students
- -providing learning experiences designed to foster personal integrity and feelings of self-worth
- -developing an awareness of the role of the gifted individual within society
- -developing an awareness and appreciation for the resources (human and natural) in our community

INSTRUCTIONAL STRATEGIES

The gifted curriculum is designed to promote the twelve student traits identified as desirable characteristics in the Long Branch Public Schools Model. These traits are:

Leadership	Self-sufficiency
Planning	Task commitment
Communication	Fluency
Risk taking	Acceptance of self and others
Problem solving	Motivation
Decision-making	Curiosity

The program attempts to relate content to broad-based issues and problems (current events, science units, social studies, economics, language arts), to master complex, higher level thinking skills, to develop research skills and methods, and to express learnings in creative ways to different audiences.

The curriculum is both accelerated and enriched. The basic Long Branch curriculum is reviewed for skill mastery at grade level in mathematics, reading and spelling, and accelerated where needed. Enrichment occurs through commercial materials (Jr. Great Books and CSMP math program) and district developed curriculum guides for basic objectives, year long science, economics, computer, creative written communication, and independent study/inquiry process units for each grade level.

The curriculum incorporates various educational strategies to enrich the academic experiences of gifted students. Strategies include:

- -compacting of curriculum through pre-testing and mastery testing to allow for acceleration
- -increased opportunities at each grade level which allow for self-directed learning with accountability through contracts and research projects
- -inquiry teaching addressing real problems
- -discussion and debate techniques stressing intelligent questioning and responding
- -the use of field trips, guest speakers and community resources to reinforce and inspire the learning situation
- -the use of literature, the study of famous people, public speaking, the social studies curriculum and class discussions/projects to develop social competence and leadership
- -questioning techniques and Bloom's Taxonomy exercises which promote the higher thought processes

CURRICULUM PLANNING

In order to effectively plan a differentiated curriculum for our gifted students, four areas of curriculum modification were addressed. These four areas were content, process, product and learning environment.

CONTENT

Content refers to the body of knowledge which is to be presented to the student. The content should relate to broad-based issues and be integrated with multiple disciplines.

Key concepts were isolated in each enrichment subject to facilitate transfer of learning, memory, and understanding of generalizations. Generalizations were made as complex as possible for each grade level. The study of famous/productive people was also included.

PROCESS

Process refers to the method of thinking. Bloom's Taxonomy was used as the teaching/learning model to develop experiences in the higher level thinking skills.

The curriculum was modified to include more concentration at the levels of application, analysis, synthesis and evaluation. Students are offered opportunities to apply knowledge to new situations, develop new ideas and products, and to evaluate the appropriateness of it all. Students are encouraged to think things out for themselves, and to give evidence of their reasoning.

PRODUCT

Product refers to the student efforts in a task or project. Products can take many forms: reports, plays, video-tapes, puppet shows, murals, charts, etc. Students are encouraged to produce products that contain original thought and that are at a level of sophistication equal to their abilities.

LEARNING ENVIRONMENT

Learning environment modification is addressed by establishing an environment that provides challenging tasks, complex ideas, sophisticated methods, and access to library materials. Teacher evaluation of student progress should be a shared experience, incorporating a direction for further learning and an acceptance of the discovery process.

MAJOR AREAS OF THE CURRICULUM

LANGUAGE ARTS

The basic goal of the language arts program is the development of highly proficient reading and communications skills. The Junior Great Books program enriches the accelerated basal (Economy) reading series by inquiring, through discussion, the interpretation of the author's meaning. Students have many opportunities for expanding their oral and written communication skills via individual and group projects derived from the district developed curriculum.

MATHEMATICS

The district's math program (Macmillan) is used in conjunction with enrichment in the CSMP math program. CSMP develops the mathematical process skills of generalizations, pattern recognition, classification, abstraction, and creative, strategic and critical thinking.

COMPUTER

Computer lessons are sequenced through each grade to promote computer awareness, keyboard familiarity, experiences with a variety of problem-solving software, word processing, and programming in LOGO and BASIC. The ultimate goal, in addition to computer literacy, is to encourage logical and creative thinking through computer experimentation and computer applications.

LONG BRANCH GIFTED K - 5 ENRICHMENT COMPONENTS

SCIENCE	MATH	COMPUTER	CREATIVE WRITTEN COMMUNICATION	ECONOMICS	INDEPENDENT LEARNING SKILLS	READING
ANIMALS	CSMP Comprehensive School Math Program	°Computer Awareness °Keyboarding Skills	Role-Playing Storytelling	Gingerbread Factory Pancake Producers Class Carnival Plant Sale	SEE TABLE	ACCELERATI
BOTANY	ACCELERATION	°Problem Solving Software °Word Processing °LOGO	LETTERWRITING	Community Planning Barter Village Star Store		
ENERGY			Writing Fiction I	Cookie Store Advertising/Marketing Assembly Line Spillover Detectives		JUNIOR GREAT BOOKS
ASTRONOMY			Writing Fiction II	Classroom Monetary System People in the Community Celebrity Auction Government in a Community The Economic System		
PALEONTOLOGY		BASIC	Journal Writing in the Affective Area	School Store Market/Command Systems Advertising/Propaganda Economics Terminology City Council Debate		
OCEANOGRAPHY		GRAPHICS	Poetry and Newspaper Journalism	Entrepreneurship Stock Market Game Taxes Creative Competition		NEWSPAPER IN EDUCATION

SCIENCE

COURSE DESCRIPTION

Each grade in the gifted program has a year-long enrichment science curriculum, in addition to the district's developmental science program. Activities and lessons have been planned to provide for maximum student involvement in discussion and application of inquiry skills, observation and prediction of results, use of concepts and terminology, and collection and analysis of data.

THEME

The theme spanning the six grade levels is "Mankind's Interaction With His Environment". Rather than studying the natural world itself, our goal is to allow our students to gain an awareness of the interdependence of man and these natural systems.

KINDERGARTEN - ANIMALS

Kindergarteners are naturally curious about animals so they have many opportunities to explore the animal kingdom. Students will investigate problem situations which harm and endanger animals and pose solutions to these problems. Field trips, speakers, books, videotapes and movies enhance these experiences.

FIRST GRADE - BOTANY

First graders become botanists for the year. Their study includes nature walks, visits to plant related businesses, guest speakers, plant growing in the classroom, investigations of plants as natural resources and the conservation of the plant world.

SECOND GRADE - ENERGY

Second graders study the physical sciences by exploring the topic of energy all year. The complex energy problems that currently challenge our society require that today's youngsters develop into intelligent citizens, able to face difficult choices and make important decisions regarding future sources, supplies, and consumption of energy. One way to help equip children to deal with these important responsibilities is to provide them early in their lives with concrete, direct experiences with several forms of energy. Energy in its largest sense is explored. Students are encouraged to follow their own interests through interest centers, projects, and experiments.

THIRD GRADE - ASTRONOMY

To third graders astronomy represents mankind's quest to understand the unknown. Space exploration epitomizes the characteristics of risk-taking and curiosity. Students develop a historical perspective and an appreciation of their planet's resources and limitations. During the year students become members of the "Young Astronaut's Program", observe the night sky through a powerful telescope, attend

planetarium programs, observe the moon's characteristics over a one month time period, make a model of their solar system, research and report on an area of interest, study the constellations, create an original myth, and share their knowledge as student lecturers.

FOURTH GRADE - PALEONTOLOGY

In order to develop the understanding that a society needs to be responsive to a changing environment, fourth graders study paleontology to become aware of the dynamic characteristics of the earth's history. Students understand that life forms have adapted to a changing environment in order to survive. Students participate in a "Fossil Day" hunt to find 35,000,000 year old shark teeth, research and create models of prehistoric life, and visit museums to prepare to be guest lecturers.

FIFTH GRADE - OCEANOGRAPHY

Oceanography, because it represents a relatively unexplored, challenging scientific frontier, and because of Long Branch's close proximity to the ocean, is a suitable course of study for fifth grade gifted students. By investigating the ocean's untapped resources for food and minerals, students become aware of the need to utilize an open-minded, problem solving approach to harnessing the ocean's potential for alleviating world problems. Students gather materials from the ocean for display and future study, take a boat trip to seine for specimens, have lunch at a seafood restaurant, research ocean organisms, and visit an aquarium.

COMMENTS TO THE TEACHER

It is suggested that one enrichment science lesson be taught per week, in addition to the regular science program.

EVALUATION

Student achievement in this course may be determined by teacher made tests, student products, homework and class participation.

SUBJECT: KINDERGARTEN SCIENCE - ANIMALS

I. GIFTED PROGRAM GOALS

II. GIFTED LEARNER OBJECTIVES

A. Students will develop an awareness of the basic needs of all animals.

B. Students will investigate various habitats in relation to the animals needs.

C. Students will analyze and diagram the interdependence of animals in a food chain.

D. Students will compile a collection of pictures of man using animals in a positive way.

E. Students will examine the relationship of man's advancements and their effect on animals.

F. Students will inspect problem situations which harm animals and find solutions to these problems.

III. CONCEPTS

A. Animals are living things that have basic needs to survive.

B. All animals have a natural life cycle.

C. Animals are interdependent and intereact with other living organisms in the environment.

D. Man uses animals to satisfy his wants and needs.

E. As man advances, animal environments are destroyed.

F. Man must play a part in protecting animals and the natural environment.

MAN USES HIS ENVIRONMENT TO SURVIVE

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES

GRADE: KINDERGARTEN

OBJECTIVES	PROCEDURES	MATERIALS
Students will recognize the characteristics of all animals. Students will understand that an animal class is made up of animals that are alike in important ways	SEPTEMBER - LESSON I - Characteristics and Classification of Animals Teacher will display pictures of mammals, birds, fish, reptiles, and amphibians on chart. As children brainstorm characteristics of animals, teacher will record on cards. After teacher reads characteristic, student will come up and put card under proper classificaiton	Picture Chart paper Evaluation Tool: Completed Chart
Students will recognize the characteristics of mammals.	LESSON II - Mammals Show film about mammals. Discussion will follow. Illicit from children characteristics of mammals: food, habitat, movement, offspring. Teacher will record on chart.	Film, Chart Evaluation Tool: Completed Chart
Students will research various mammals by looking at pictures and books.	LESSON III - Mammals Divide students into 4 teams by having children choose card with P for Panda, W for Whale, M for Manatee, S for Seal. Give each group books and pictures relating to animal being researched. Students will be told to look for the following facts: 1) Appearance; 2) Food; 3) Habitat; 4) How animal protects itself With the assistance of parent volunteers, teacher will illicit from students, in sentence form, important facts about animal being studied. Each fact will be recorded on the bottom of drawing paper. Student will then create a picture illustrating fact. Teacher will tape pictures together, to put on rollers to make a cardboard T.V. set. Students will share Mammal T.V. show with other classes	Books Pictures Paper Crayons Markers Evaluation Tool: Mammal T.V. Show
Students will examine how man is harming the panda, whale, seal, manatee, and what we can do to prevent extinction.	LESSON IV - Endangered Mammals Students will brainstorm reasons why people would harm these animals and ways we can help to prevent endangerment	Paper, pencil - to write to organizations

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES
GRADE: KINDERGARTEN
PAGE: 2

OBJECTIVES	PROCEDURES	MATERIAL
	Possible animal conservation projects: -Adopt a Humpback whale Whale Adoption Project 320 Gifford Street Falmouth, Massachusetts, 02540 -Campaign to save the whales People's Campaign to Save The Whales C/O Whale Protection Fund 624 9th Street, N.W. Washington, D.C., 20001 -Help WWF Save the Pandas World Wildlife Fund 1250 Twent-Fourth Street, N.W Washington, D.C., 20037 -Contributions to Greenpeace Organization to help preserve our planet's environment - protecting whales, dolphins, etc. Greenpeace P.O. Box 3720 Washington, D.C., 20007 -Save Alaska Wolves Defenders of Wildlife 1244 19th Street, N.W. Washington, D.C., 20036 -International Fund for Animal Welfare (Save the Seal) IFAW P.O. Box 193 Yarmouth Port, Mass., 02675 *Raise money according to teacher's preference for conservation project	Evaluation Tool: Teacher Observation
	OCTOBER - Birds - Lessons V-VIII	
Students will explore the characteristics, habitats, and needs of birds.	LESSON V - Guest Speaker - Local naturalist (Contact: Owl Haven, Manalpan, N.J.) Students will obtain background information from resource person. After completion of presentation teacher will illicit from students characteristics, habitat, and needs of birds and will record on chart.	Chart paper Evaluation Tool: Completed Chart
Students will recognize the basic characteristics of birds	LESSON VI Teacher will display books, pictures of various birds. Students will create birds using styrofoam, construction paper, feathers, etc.	Books, pictures, styrofoam, feathers, paper, etc. Evaluation Tool: Finished project.

OBJECTIVES	PROCEDURES	MATERIAL
Students will construct a bird's nest	LESSON VII Display bird's nest. Students will brainstorm list of material needed to create a "class" bird's nest. Students will go outdoors and collect necessary materials. Upon return to classroom, teacher will construct bird's nest with students. Teacher will display birds from previous lesson and nest on 3-dimensional teacher-made tree.	Sticks, dried grass, etc. Evaluation Tool: Finished Project
Students will develop an awareness of their role in protecting birds and their environment	LESSON VIII - Endangered Birds Set up study center where students can explore a variety of endangered species such as the California condor, whooping crane, bald eagle, osprey, etc. Display posters, pictures, books magazines (Ranger Rick, Your Big Backyard). After all students have been at center, brainstorm reasons why they think these birds are in danger and how we can save these animal friends. Possible projects: -Class membership in: National Audubon Society 950 Third Avenue New York, N.Y., 10022 -Field trip to: Gateway National Recreation Area (Bird Sanctuary) Sandy Hook, N.J.	Pictures, books, posters, magazines Evaluation Tool: Teacher Observation
Students will explore the characteristics, habitat, and needs of fish	NOVEMBER - Fish - Lessons IX-X LESSON IX - Field Trip To a pet store that specializes in fish. Upon return to classroom, students will brainstorm characteristics, habitat, and needs of fish. Teacher will record on chart.	Chart paper Evaluation Tool: Completed Chart
Students will analyze and diagram the interdependence of animals on the food chain.	LESSON X - Display picture of an ocean food chain. Students will analyze the interdependence of fish. Students will diagram an ocean food chain.	Paper, crayons, etc.
Students will analyze how pollution makes it difficult for organisms to live and stay healthy	DECEMBER - Fish Lessons XI-XII LESSON XI To stimulate a class discussion, a scrapbook with articles explaining pollution problems in our local area will be provided by teacher. Students will share their knowledge of this problem with the class. Students will add to scrapbook by bringing in newspaper and magazine articles.	Scrapbook, paper, paste, newspaper and magazine articles Evaluation Tool: completed scrapbook

OBJECTIVES	PROCEDURES	MATERIAL
Students will develop an awareness of their role in protecting fish and their natural environment	LESSON XII Illicit from students steps we can take to stop ocean pollution. Class will compose and teacher will record letter to Environmental Protection Agency, Washington, D.C., 20036, voicing our concern about pollution. Possible Guest Speaker: Marine Biologist	Paper, Pencil Evaluation Tool: Letter to E.P.A.
	JANUARY - Reptiles - Lessons XIII-XVI	
Students will identify the characteristics, habitat, and needs of reptiles	LESSON XIII Show film about reptiles. Discussion will follow. Brainstorm a list of characteristics. Teacher will record on chart.	Film Chart Evaluation Tool: Completed Chart
Students will create a mural and acquire knowledge of the natural habitat of reptiles	LESSON XIV Students (with teacher assistance) will create a mural displaying reptiles and their natural habitat	Mural paper, markers, crayons Evaluation Tool: Completed Mural
Students will interpret information provided through illustrations and gain an understanding of why some reptiles are in danger of extinction	LESSON XV Through the display of pictures and questioning, students will formulate causes of the extinction of sea turtles, American alligator, mona boa, American crocodile. Illicit from students what man can do to save these reptiles from extinction.	Pictures Evaluation Tool: Teacher Observation
Students will compose letters to agency to gain further knowledge of sea turtles	LESSON XVI To further study the sea turtle, students will write to: Center for Environmental Education 624 9th Street, N.W. Washington, D.C., 20001 Attention: Sea Turtle Rescue Fund	Paper, pencil Evaluation Tool: Completed Letters
	FEBRUARY - Amphibians - Lessons XVII - XIX	
Students will examine books about amphibians to gather information about characteristics	Students will go to library to locate and take out books about amphibians. Upon return, students will look through books. Students will brainstorm a list of physical characteristics of amphibians. Teacher will record on chart.	Books, chart paper, marker

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES

GRADE: KINDERGARTEN

OBJECTIVES	PROCEDURES	MATERIAL
	LESSON XVIII	
Students will analyze illustrations to construct a diorama	Teacher will display pictures, posters, etc., of amphibians in their natural habitat. Students will observe and then construct a diorama	Books, pictures, posters, shoe boxes, natural materials Evaluation Tool: Completed Project.
	LESSON XIX	
Students will interpret information provided through illustrations and gain an understanding of why some amphibians are in danger of extinction	Through presenation of material of endangered amphibians (Golden Coqui, Houston Toad, Pine Barren Tree Frog, Desert Salamander) Students will formulate reasons why they think these amphibians are in danger and what we can do to save them.	Books, pictures, posters Evaluation Tool: Teacher Observation
	MARCH - Pets - Lessons XX-XXIII	
Students will develop an awareness of the basic needs and care of pets.	Invite guest speaker from A.S.P.C.A., Humane Society or veterinarian to bring an animal and discuss needs and care of pets.	Evaluation Tool: Teacher Observation
	LESSON XXI	
Students will develop a respect for animals by caring for class pet.	Field trip to pet store to purchase a pet and its food for the classroom. Upon return, set up discovery center for observation of pet.	Pet and pet supplies Evaluation Tool: Teacher Observation
	LESSON XXII	
Students will realize that pets have a variety of specific needs, some very similar to human needs	Via observation and questioning, students will relate information on physical characteristics , needs, etc., of pet. Compare and contrast human needs to needs of pet. Teacher will record on chart.	Chart paper Evaluation Tool: Completed chart
	LESSON XXIII	
Students will create an imaginary pet	Students will create an imaginary pet from clay. Each student will compose and teacher will record a simple natural history of animal, what it eats, where it lives, etc.	Clay, paper, pencil Evaluation Tool: Completed Project.
	APRIL - National Pet Month - Lessons XXIV-XXV	
Students will plan a class pet show	Students will plan a pet show: -Select categories for prizes such as smallest pet, largest pet, well mannered, well groomed, etc. -Create "ribbons" for prizes -List pets for pet show -Enlist principal to be pet show judge -Create invitations for guests -Enlist parent volunteers to assist -Practice (rehearse) pet show	Chart paper, construction paper, markers

OBJECTIVES	PROCEDURES	MATERIAL
	LESSON XXVI	
Students will simulate a pet show	Students will put into practice an actual pet show. Ask parent to video-tape	Video camera Video-tape
	MAY - Man Uses Animals in Positive Ways - Lessons XXVII-XXV	
	LESSON XXVII	
Students will examine various ways that man uses animals in a positive way.	Teacher will display pictures of animals that are used in positive ways by man and a chart divided into 5 categories - pleasure, protection, work, clothing, and food. Students will then examine ways man uses these animals in a positive way. Students will place the picture in the appropriate section of the chart.	Pictures, chart Evaluation Tool: Completed Chart
	LESSON XXVIII	
	Field trip to farm - upon return compose experience chart including ways animals are used on a farm in positive ways.	Chart paper, magic markers Evaluation Tool: Completed Chart
	LESSON XXIX	
Students will collect pictures and create books about man using animals in a positive way.	Students will make books of man using animals in a positive way by cutting out pictures from magazines	Magazines, paper, paste Evaluation Tool: Completed Student book
	LESSON XXX	
	Guest Speaker - Contact local agency for the blind. Ask for someone to speak about seeing eye dogs.	Evaluation Tool: Teacher Observation
	JUNE - ZOO - Lessons XXXI-XXXIII	
Students will examine one part of man's attempt to prevent extinction of some animals by visiting a zoo	LESSON XXXI Field trip to a zoo. Divide class into teams to study different groups of animals. Take along sketch pads, notebooks, and tape recorders to record sights, sounds, and activities of animals. If possible, students will attend a program at zoo regarding ways zoo is helping endangered animals. Upon return, students will create "roll T.V." (see Lesson III) using information gathered on field trip.	Pads, notebooks, tape recorders, paper, crayons Evaluation Tool: T.V. Show

TEACHER RESOURCES

FILMS - (Monmouth County Audio-Visual Aids Commission)

Mammals (MP) 111949
Reptiles (MP) 112022

RESOURCE BOOKS

Burt, Olive W. Rescued! America's Endangered Wildlife on the Comeback Trail. New York: Jullian Messner, 1980

Cook, David. Our Endangered Earth-Land Animals. New York: Crown Publishers, 1983.

Cook, David. Our Endangered Earth-Ocean Life. New York: Crown Publishers, 1983.

Flemming, Bonnie Mack & Hamilton, Darlene Softley. Resources for Creative Teaching in Early Childhood Education. N.Y.: Harcourt Brace Jovanovich, Inc. 1977.

Green, Ivan. Wildlife in Danger. N.Y. Coward-McCann, 1960.

Jacobs, Francine, Sea Turtles. Washington, D.C., Center for Environmental Education, 1981

Perry, Bill. Our Threatened Wildlife. New York: Coward-McCann, 1969

SUBJECT: FIRST GRADE SCIENCE - BOTANY

I. GIFTED PROGRAM GOALS

II. GIFTED LEARNER OBJECTIVES

A. Students will conduct various experiments to formulate generalizations about plant growth.

B. Students will examine the seasonal life cycle of a tree.

C. Students will develop an awareness of the vast resources that plants provide.

D. Students will create a mural to show the many ways that plants help people.

E. Students will use plants to create projects of aesthetic value.

F. Students wil inspect problem situations which harm plants and find solutions to these problems.

III. CONCEPTS

A. Plants are living things that have basic needs to survive.

B. The life process of a plant is a complex system.

C. Plants are a natural resource.

D. Man uses plants to satisfy his wants and needs.

E. Man must conserve the plant world.

COMMENTS TO THE TEACHER:

-Experiments can be set up in a science center for for independent observation.

-Many suggested projects are given in one lesson. Teacher may choose one or more according to available time.

-Some projects can be done independently at home.

-Due to plants being seasonal, some scheduling may need altering

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES

GRADE: FIRST GRADE

OBJECTIVES	PROCEDURES	MATERIALS
Students will formulate generalization about plant growth through experimentation and independent observation.	SEPTEMBER The following experiments will be placed in a science center for students to observe independently. LESSON I - Plants Need Air You will need a plastic cup, soil and seeds. 1. Put one inch of soil. Place 3 or 4 seeds against plastic Add another inch of soil and repeat process for a total of 3 layers. Water and place in a sunny place. 2. Students will observe growth 3. Form generalizations about depth and air getting to the seed.	Plastic cup, soil, seeds. Evaluation Tool: students will illustrate all experiments for a display board.
	LESSON II - Plants Need Water Teacher will set up experiment with celery stalk in colored water, one without water. 1. Student will observe how plants absorb water into their system. 2. Students will compare celery without water and formulate generalizations.	Celery stalk, food coloring, water
	LESSON III - Plants Get Their Food From the Soil Teacher will set up experiment. 1. You will need 2 plants of the same type. Plant in soil and feed one with fertilizer. Students will note difference in plant growth. List nutrients in plant food. 2. Students will formulate the generaliztion that plants get nutrients from the soil.	Plants, soil, fertilizer
	LESSON IV - Plants Need Light Teacher will set up experiment. You will need a geranium plant, black construction paper and paper clips. Cover 2 leaves with paper. Place plant in a sunny spot. students will observe, after a week, the effect of blocking out light. Students will then observe how long it takes for leaves to return to green again. To reinforce concept, teacher will do an experiment showing phototropism. A plant is placed in an enclosed box with a hole facing the light Plant will grow out of the hole toward the light.	Geranium plant, black construction paper, paper clips Plant, shoe box, light source

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES
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OBJECTIVES	PROCEDURES	MATERIAL
	OCTOBER	
Students will diagram the parts of a plant and acquire knowledge of each part's function	LESSON V - Parts of a Plant Teacher will display a diagram of a plant. Students will label parts in a notebook and discuss the function of each part.	Evaluation Tool: Teacher made ditto
Students will develop an appreciation for the complexity of the life cycle of a tree.	LESSON VI - The Life Cycle of a Tree Guest Speaker - Local tree service may give presentation to class	Evaluation Tool: Written statements of information students obtained from speaker
	LESSON VII - Seasons Change Students will create a mural of the seasonal changes a tree experiences	Large paper, markers Evaluation Tool: Completed Mural
	NOVEMBER LESSONS VIII - XI Nature Walk Field trip to a woods. Students will collect leaves, seeds, bar, twigs, etc. They will focus on resources in the woods that man would use to survive.	
Students will use collected materials in "hands-on: projects	Upon returning to the classroom the following self-directed projects will be constructed: 1. Leaf booklet - students will press leaves between 2 sheets of waxed paper to form transparent pages. Students will use various resources to label leaves. 2. Seed Collection - students will sort seeds and glue them into egg cartons. They will identify and label them. 3. Students will use sticks, leaves, and bark to construct a model shelter. 4. Students will experience tasting seeds provided by teacher (not from collection)	Evaluation Tool: Completed Projects. Waxed paper, labels Egg cartons, labels Glue edible seeds
	DECEMBER	
Students will examine the many resources that plants provide	LESSON XII - Plants Give Us Food Students will review the parts of a plant and discuss that we eat the different parts. Students will complete a chart by listing foods that come from each part of the plant. Chart must contain these categories: leaves, stems, roots, tubers, seeds, flowers.	Teacher made chart on ditto Evaluation Tool: Completed Chart
Students will experience the use of plants as natural resources.	LESSON XIII Vegetable Feast Students will bring in a food prepared from a vegetable to share with the class at a vegetable feast.	Evaluation Tool: Written Statement from each student about the experience

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES
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OBJECTIVES	PROCEDURES	MATERIAL
	JANUARY LESSON XIV - Plants Give us Paper Products	
Students will produce a product from a natural resource	Students will experience the process of making paper. Procedure can be obtained from: "How to Make Paper by Hand" from: Hammermill Papers Group Educational Services P.O. Box 10050 Erie, Pennsylvania, 16533 (Send 25¢)	Evaluation Tool: Student created display of process
Students will produce a product from a natural resource.	LESSON XV - Plants Give Us Dye Using several sources, such as tea, blueberries, dandelions, and beets, students will experience the use of natural resources to dye cloth	Tea, blueberries, dandelions, beets
Students will compile a collection of products made from plants	LESSON XVI - Plants Give Us Other Products A display table will be set up with various products that were made from plants. Students will bring in items for the table.	Evaluation Tool: Teacher will record items brought in from each student and evaluate choices
	FEBRUARY	
Students will analyze information and make a generalization.	LESSON XVII - Plants Help Us Breathe Teacher will display a chart explaining the process of photosynthesis. Water + CO_2 + Light Sugar + O_2 + Water Students will formulate the generalization that plants help us breathe by taking carbon dioxide out of the air and putting oxygen into the air.	Photosynthesis Chart Evaluation Tool: Student's oral explanation of information.
	LESSON XVIII-Plants Stop Erosion	
Students will interpret information provided through illustrations	Teacher will display pictures of contour farming. Students will analyze how the plants are keeping the soil from washing away. Teacher will display a picture of trees growing on the side of a mountain. Students will interpret the picture	Pictures Evaluation Tool: Student's oral interpretation of information.
	LESSON XIX - Plants Slow Down Wind	
Students will formulate ideas about wind erosion	Students will discuss wind as another cause of erosion. Students will formulate how plants can counteract wind. Example: Tree barriers Dune grass	Evaluation Tool: Student illustration and oral explanation

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES
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OBJECTIVES	PROCEDURES	MATERIAL
	LESSON XX - Plants Help Clean the Air	
Students will observe an experiment and formulate a generalization	Teacher will display a fuzzy leaf (African Violets) and distribute dust over the plant. Students will observe and formulate the generalization that tiny hairs on leaves collect dust, pollen, and other pollutants in the air. Students will examine pictures of the underside of a leaf.	African Violet
	NOTE: Due to the time of year, this lesson will be reviewed in the Spring when leaves are available. An experiement will be conducted.	Evaluation Tool: Teacher observation of student contribution to discussion
	MARCH XXI - Plants Cut Down on Noise Pollution	
Students will interpret information provided through illustration	Teacher will display a picture of a highway lined with trees, students will discuss reasons why trees are planted by highways. Through questioning, teacher will illicit the idea that plant barriers absorb noise. This concept can be related to landscaping cities, such as Paris, to absorb city noises. Teacher can display pictures of cities which have used this technique.	Pictures Evaluation Tool: Teacher observation of student contribution to discussion.
	LESSON XXII - How Plants Help Us	
Students will work cooperatively to illustrate acquired knowledge	Students will work in groups to illustrate on a large mural, "How Plants Help Us". They will recall facts from the last nine lessons and incorporate them into one large illustration	Large paper, markers Evaluation Tool: Completed Mural
	APRIL LESSON XXIII - Plant Problems	
Students will examine problem situations that harm the plant world. Students will work independently and as a team to collect data	Students will work in groups to examine the following problems that affect the plant world: 1. Drought-forest fires 2. Floods 3. Pollution 4. Clearing land for building Each group will collect pictures from magazines and newspapers to compile a scrapbook Students will write letters to resource people and organizations to collect data.	Magazine, newspapers, scrapbook Evaluation Tool: Completed scrapbook

OBJECTIVES	PROCEDURES	MATERIAL
	LESSON XXIV - Solutions to Problems	
Students will evaluate problems and propose child-oriented solutions	Discussion topic: Now that we know some of the problems that the plant world faces, how can we help? Students will brainstorm ideas and solutions for each problem. Students will evaluate and select items from the list that students can do to help. EXAMPLES: 1. Contribute to "Save the Redwoods" 2. Write letters to the government. 3. Create a presentation to share with other classes on "Ways to Conserve Water" 4. Design posters about preventing forest fires. 5. Plant new trees	Poster paper, tree seedlings Evaluation Tool: Completed projects
	MAY - JUNE LESSON XXV - Plants Give Us Beauty	
Students will develop an appreciation for the aesthetic beauty of plants.	Possible Field Trips 1. Florist - Greenhouse 2. Nursery 3. Horticultural Center 4. Botanical Garden	Evaluation Tool: Experience stories and pictures
	LESSON XXVI - Aesthetic Plant Projects	
Students will create aesthetic projects	Students will use plants in various projects, such as dried flower wreaths, decorative planters, potpourri items, pressed flower pictures, etc.	Dried flowers Flower Pots Other craft supplies Evaluation Tool: Completed projects.

FILMS - Available through Monmouth County Audio-Visual Aids Commission

Farms in Winter - MP-111551
Visit to Apple Cider Country - MP-212560
Visit to Maple Farm - MP-111122
Seeds Grow Into Plants - MP-111559
Farms in Fall - MP-111655
Growing, Growing - MP-104562
Greenhouse - MP-110045
Agri-Business - MP-103365
Grasses - MP-105337
Farms in Summer - MP-111550
Cloth-Fiber to Fabric - MP-200540
Pencil - MP112195

VIDEO-TAPES - Available through Monmouth County Audio-Visual Aids Commission

Plants - VH-990190
Growing Things - VH-990184
See How They Grow - VH901150
Flowers and Seeds - VH-990181
In The Forest - VH-900535

FREE AND INEXPENSIVE MATERIALS FOR TEACHERS

"Trees of the Northeast Coloring Book"

Dover Publications, Inc.
31 East 2nd Street
Mineola, New York, 11501

Send $2.75 plus .85 for postage and handling

"Trees of Arkansas", by Dwight M. Moore

Arkansas Forestry Commission
1 and E Office
P.O. Box 4523
Asher Station
Little Rock, Arkansas, 72214

Send $2.00 - for one copy

"A Child' Garden"

Chrevron Chemical Co.
Public Affairs
575 Market Street
San Francisco, California, 94119

Send postcard

"Sierraecology" Newsletter

Sierra Club
Information Services
730 Polk Street
San Francisco, California, 94109

Send Postcard

"Arbor Day News"

The National Arbor Day Foundation
100 Arbor Avenue
Nebraska City, Nebraska, 68410

Send Postcard - one free copy

"How to Make Paper By Hand"

Hammermill Papers Group
Educational Services
P.O. Box 10050
Erie, Pennsylvania, 16533

Send 25¢

SUBJECT: SECOND GRADE SCIENCE - ENERGY

I. GIFTED PROGRAM GOALS

II. GIFTED LEARNER OBJECTIVES

A. Students will conduct surveys and analyze data in order to evaluate the extent and effectiveness of energy conservation techniques and practices.

B. Students will compare and contrast the effect different forms of energy have on man's environment.

C. Students will formulate theories regarding the future use of energy sources.

D. Students will investigate the methods employed by the community regarding the production, distribution, and utilization of various forms of energy.

E. Students will design devices to harness the sun's heat energy.

III. CONCEPTS

A. Decisions must be made regarding the consumption of energy.

B. Different sources of energy create problems when utilized that affect the nature of man's environment.

C. A society's future is a reflection of man's attempt at conservation today.

D. Energy is the ability to do work by producing a change in other matter.

E. The sun, as a source of energy, has implications for the future of mankind.

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES

GRADE: SECOND GRADE

OBJECTIVES	PROCEDURES	MATERIALS
	SEPTEMBER LESSON I - Introducing Energy	
Students will develop questions/objectives about energy that they would like to explore	1. Brainstorm ideas as to the meaning of energy 2. Read from the book, "What is Energy". 3. Show film, "The Great Search", and discuss concepts. 4. On chart paper, list the questions students would like answered by the year-long study of energy	References: "What is Energy" Film: "The Great Search" Chart Paper Evaluation Tool: Student questions
Students will develop an understanding of matter, molecules, and atoms through observation	LESSONS II & III - Introduction To Matter 1. Show films: A. The Atom-A Closer Look B. The World of Molecules C. Learning about liquids, solids, and gases. 2. Have students summarize what the films were about. 3. Read and show pictures from Atoms by Melvin Berger. 4. Conduct a simple experiment to show the different forms of water. 5. Have students discuss when they have learned about matter, molecules and atoms and state a generalization about each.	References: Atoms, by Melvin Berger Films: "The Atom - A Closer Look" "The World of Molecules" "Learning About Liquids, Solids, and Gases" Evaluation Tool: Student developed generalizations
	OCTOBER LESSON IV - Kinetic and Potential Energy	
Students will compare and contrast kinetic and potential energy	1. Have students illustrate examples of kinetic energy in their everyday life showing how these moving bodies can do work. 2. Do the same for everyday examples of potential energy. 3. Discuss the possibility of changing or transforming one type of energy into another. Demonstrate with a yo-yo or a paddle-ball toy.	Drawing paper, yo-yo, paddle ball toy Evaluation Tool: Students can differentiate between kinetic and potential energy at work in everyday situations.
	LESSON V - Introducing Simple Machines: The Lever	
Students will conclude that a simple machine such as a lever makes work easier by observing experiments using a lever	1. Using a ruler, eraser and a rock, lay ruler across the eraser letting it extend 2 or 3 inches from the eraser. Place the rock on the short end of the ruler and push down on the long end. Vary placement.	Simple Machines Science Kit The Ladybird Junior Science Book of Levers, Pulleys, and Engines pp. 4-11

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OBJECTIVES	PROCEDURES	MATERIAL
	2. Present examples of different kinds of levers such as scissors, tongs, turn signal on a car, oars of a boat. 3. Ask class to look for things they have in common? Differences? How do they make work easier?	Evaluation Tool: Student responses to how a lever makes work easier.
Students will experiment with different systems of pulleys Students will observe how pulleys make work easier	LESSON VI - Pulleys 1. Demonstrate how a fixed pulley makes work easier by tying a book (load) to one end of a pulley rope and then pulling the rope. The effort used can be measured by a spring balance. 2. Set up a similar experiment using a movable pulley. 3. Encourage students to draw conclusions regarding the relationship between work and pulleys	Fixed pulley, book, spring balance Ladybird Book pp. 20-23 Simple Machines Science Kit Evaluation Tool: Student conclusion that pulleys make work easier
Students will explore the function of the wheel and axle as a simple machine that makes work easier.	LESSON VII - Wheel and Axle 1. Construct a windlass and perform the following experiments. **EXPERIMENT A.** You will need: Brick, ruler, windlass. Put the brick in place. It should touch the base of the windlass. Turn the large wheel through one complete revolution. Use a ruler to find out how high the brick was lifted. Turn the small wheel through one complete revolution. Again, measure to see how high the brick was lifted. Is there a difference in height? One complete turn of either wheel lifts the brick through the same distance. The height is the same, whether you use the big wheel or the small wheel. Cut a piece of string the same length as the distance the brick was lifted. Measure the distance carefully. Wrap the string around the axle. The string fits around the axle exactly. The length of the string is equal to the circumference, or distance around the outside of the axle. One complete turn of the big wheel lifts the load through a distance equal to the circumference of the axle. One complete turn of the small wheel lifts the load the same distance. A big wheel offers no advantage in distance. But did you notice a difference in the effort used as the load was lifted? Try it again. Lift the load by turning the small wheel. Now use the large wheel. Which was easier?	Nails, rope, a brick, 2 screw eyes a small whell (6" diameter), a large wheel (12" diameter), a wooden base, a wooden rod, a ruler, spring balance

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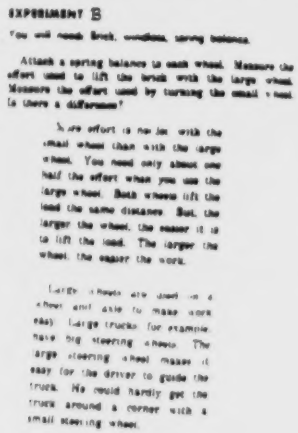
OBJECTIVES	PROCEDURES	MATERIAL
		Evaluation Tool: Students will provide examples when the wheel and axle are used to make work easier
	2. Students should be asked to describe how the wheel and axle function and offer examples of where it is used.	
	NOVEMBER LESSONS VIII AND IX - The Inclined Plane, The Screw, and the Wedge	
Students will experiment with the inclined plane, the screw, and the wedge in order to discover how they make work easier	1. Using the Simple Machines Kit, set up demonstrations where students can measure the amount of force used to move weight on an inclined plane at different heights. 2. Ask students to fomulate generalizations from their observations. 3. Follow the same procedure to illustrate how the wedge and the screw make work easier. 4. Show film, "Energy-Can't Do Without It" 5. Ask students to summarize the material presented in the film.	Simple Machines Kit, Spring Balance Evaluation Tool: Student formalized generalizations regarding the relationship between work and the inclined plane, the wedge, and the screw.
	LESSON X	
1. Students will document in a story the machines that play a part in their everyday lives. 2. Students will be tested to evaluate their knowledge and understanding of concepts presented.	1. Have students write a story about a typical day in their lives mentioning all the machines that they utilize. 2. Ask student to cut out pictures from magazines which show machines to create a collage. 3. Administer a test to measure student growth in knowledge and understanding of the ideas pertaining to energy explored thus far.	Writing paper, magazines Evaluation Tool: Teacher prepared test on energy.

OBJECTIVES	PROCEDURES	MATERIAL
	DECEMBER LESSON XI - Introducing Solar Energy	
Students will observe that heat is the energy of moving molecules through experimentation	1. Place a tumbler of cold water next to a tumbler of hot water. Add 2 drops of red food coloring to each tumbler. 2. Ask students to observe and then describe what has happened to the food coloring in each tumbler. 3. Students should conclude that the molecules of hot water have more kinetic energy than the molecules of cold water. These faster moving molecules disperse the food coloring more quickly.	Tumbler of cold water, tumbler of hot water, red food coloring Evaluation Tool: Student observations and conclusions
	LESSON XII - Solar Energy: Constructing a Solar Collector	
Students will design a simple solar collector Students will determine if a solar collector is an effective device for trapping heat energy	1. Show film, "Learning About Solar Energy" 2. Ask students to summarize what the film was about. 3. Ask students to think of a way they could trap the sun's energy and convert it into heat. Explain that the basic principle upon which the collector works is the green house effect. 4. Demonstrate by constructing a simple solar collector using a coffee can, black spray paint, plastic wrap, and a thermometer. 5. Variations of this model can be investigated by using different types of cover materials changing the color, or change in angle or slant of the can with respect to the sun.	1 lb. coffee can with plastic lid, thermometer, clear plastic wrap, black spray paint. Film: "Learning About Solar Energy" Evaluation Tool: Student designed solar collectors
	LESSON XIII	
Students will illustrate ways heat is produced and utilized	Have students make mini-booklets that show how heat is produced and used in our everyday lives.	Drawing and writing paper Evaluation Tool: Student Booklets
	JANUARY LESSONS XIV AND XV Introduction to Electricity	
Students will recognize that electricity is a form of energy and is used to do work Students will become familiar with some of the basic principles of electricity	1. Show the following films: A. Learning About Electric Current B. Electricity All About Us C. Electricity, Electricity 2. Have students summarize the ideas presented in each film. 3. Ask students to describe ways in which we use electricity.	Films: Learning About Electric Current Electricity All About Us Electricity, Electricity Evaluation Tool: Student summaries

OBJECTIVES	PROCEDURES	MATERIAL
	4. Create a bulletin board display with student drawings or pictures cut from magazines showing how we use electricty.	
	LESSON XVI	
Students will illustrate knowledge gained concerning the production, distribution, and utilization of electrical energy in their community by listening to a speaker from JCP&L	1. Invite a speaker from JCP&L to explain how electricity is produced and distributed throughout the community.	JCP&L Speaker
	2. Students will make a mural to show the production, distribution, and utilization of electrical energy in the community.	Evaluation Tool: Student Mural
	FEBRUARY LESSON XVII - Current Electricity	
Students will gain the knowledge that the flow of electrons cause an electric current.	1. Display a picture of an atom and label the different parts explaining that the electron is the only part which can move.	Battery, wire, flashlight bulb
	2. Show a piece of wire to the class and ask what would happen if an extra electron was added to the first atom in the wire.	Evaluation Tool: Student Posters
	3. Students should conclude that the atom pushes the extra electron into the next atom. This happens to every atom in the wire. The jumping of electrons from one atom to the next is what we call electricity Electricity is a stream of electrons racing in one direction from one atom to the next.	
	4. Have students suggest ways they would use to get the electrons moving such as a battery or a generator.	
	5. Students can experiment with a battery, wire, and a flashlight bulb.	
	6. Have students illustrate by making a poster how the flow of electrons in one direction results in electricity.	
	LESSON XIX - Direct and Alternating Current	
Students will differentiate between direct and alternating current	1. Ask students to summarize what they learned about electricity in the last lesson.	Battery, wire, flashlight bulb
	2. How can we find out if elec trons always travel in the same direction? Reverse the position of the battery and the flashlight bulb and ask students to describe what they observe.	

OBJECTIVES	PROCEDURES	MATERIAL
	3. Students should conclude that electrons can move in either direction. Explain that this is called alternating current as opposed to direct current where electrons are moving in only one direction. 4. Have students prepare a list of appliances they have at home that use DC, AC, or both	Evaluation Tool: Student lists
	LESSON XX - Conductors and Non-Conductors	
Students will determine what conditions must be met in order to have electricity	1. Connect one end of a wire to a battery and the other end to a flashlight bulb. Ask students why there is no light. 2. Students should conclude that there wasn't a complete circuit. 3. Have students use their materials to demonstrate a closed or complete circuit. 4. What do we mean by a short circuit? Demonstrate to show that this occurs when electricity from the lead wire jumps to the return wire. 5. What happens when wires are carrying more electricity than they are supposed to? 6. How does a fuse prevent fires? Explain its purpose 7. Can electricity travel through any kind of wire or material? 8. Have students experiment with different kinds of conductors. 9. They should conclude that copper and aluminum are examples of good conductors (a material that permits the flow of electrons) 10. Rubber is an example of a non-conductor or insulater (a material that does not allow electricity to pass) 11. Have students formulate a list of the conditions necessary to have electricity.	Battery, wire, flashlight bulb, fuses, copper wire, aluminum wire, thread (cotton, silk, nylon), rubber band, plastic covered wire. Evaluation Tool: Student formulated list of conditions.

OBJECTIVES	PROCEDURES	MATERIAL
	MARCH LESSON XXI - Experimenting With Simple Circuits	
Students will experiment with simple circuits in order to prove that: A. an electric current only flows through a complete circuit B. electrons flow from a negative to a positive terminal, and C. a switch is a convenient and safe way to open and close a circuit	1. Create a learning center by using activity cards that describe experiments on electricity along with all the necessary materials that students may work with either in groups, pairs, or individually. 2. Task cards should include how a switch can be used to open and close a circuit 3. Students should have an opportunity to share by demonstrating to the class the experiments they worked on.	Wire (copper, aluminum, plastic coated), C batteries, D batteries, 9 Volt batteries, dry cell batteries flashlight bulbs, sockets, pieces of metal, blocks of wood, nails (large and small), hammer, switches, cardboard, tin foil, thumbtacks, paper clips, screws. Teacher prepared activity cards or Electricity Box Experiment and Activity Set. Evaluation Tool: Student experiments.
	LESSON XXII - Electricity Safety Rules	
Students will develop a list of safety rules to remember when working with electricity.	1. Brainstorm the relationship of safety to electricity and have students formulate a list of rules to observe. Record on chart paper. 2. Have each student select a rule that they would like to make a poster about 3. Display throughout the school.	Chart paper, poster paper, crayons, magic markers, rulers, stencils Evaluation Tool: Student Posters
	LESSON XXIII - Generating Electricity	
Students will recognize that other forms of energy may generate electricity	1. Construct a simple cardboard turbine, connected to a rotating magnet. 2. Heat water in a tea kettle (a hot plate is suggested) 3. Students should observe that the fire heats the water to produce steam. The power of the steam pushes against the blades of the turbine. The magnet that is connected to the turbine has been placed inside a coil of electrical wire and will rotate as the cardboard blades are moved by the steam power. The magnet, covered by many coils of covered wire is called an electromagnet. Both ends of the wire are attached to a flashlight bulb. As the magnet rotates inside the coil of wire, it is moving electrons, thus, causing the flow of electricity which lights the bulb. 4. Ask students to suggest another way that steam can be produced (burning coal or oil) to run a generator that produces electricity.	Hot plate, tea kettle, cardboard turbine, magnet, electrical wire, flashlight bulb.

OBJECTIVES	PROCEDURES	MATERIAL
	5. What, besides steam, could power a generator? (falling water and atomic energy) 6. Have students write a short story describing the different forms of energy that are used to generate electricity.	Evaluation Tool: Student Stories
	LESSON XXIV - Magnets	
Students will conduct experiments in order to identify the properties and characteristics of magnets	1. Show film "Magnets, Magnetism, and Electricity" 2. Have students summarize the contents. 3. Provide an opportunity for students to conduct experiments with magnets at the Interest Center using teacher made or commercially prepared Task Cards. 4. After performing experiments involving magnets, students will complete a form on which they will list the properities and characteristics of magnets.	Film: Magnets, Magnetism, and Electricity Task Cards Evaluation Tool: Student forms
	APRIL LESSON XXV - Chemical Energy	
Students will analyze the relationship between chemical energy and potential energy	1. Show the route that fuel oil takes from its start in nature to its point of use in the community. 2. Prepare a worksheet where the various stages have been scrambled and students have to sequence them. 3. Have students suggest reasons why we burn gasoline and fuel oil. This will prompt them to determine the relationship between potential energy and chemical energy.	Teacher prepared worksheet Evaluation Tool: Student responses
	LESSON XXVI - Nuclear Energy	
Students will recognize that a nuclear reactor provides energy Students will gather data on nuclear energy Students will become familiar with the advantages and disadvantages of nuclear energy by engaging in a debate.	1. Show film, "Learning About Nuclear Energy" 2. Have students discuss and summarize the contents. 3. Take students to the library to do research on nuclear energy. 4. Conduct a class debate on the advantages -vs- the disadvantages of using nuclear energy.	Film: Learning About Nuclear Energy Evaluation Tool: Student Debate
	*LESSONS XXVII-XXVIII - Energy Sources of the Future	
Students will analyze the environmental, social, and economic problems created by utilizing different forms of energy.	1. Show film "Energy Sources of the Future" 2. Have students discuss and summarize the contents of the film.	Film: "Energy Sources of the Future" Chart paper

OBJECTIVES	PROCEDURES	MATERIAL
Students will select their choice of an energy source of the future by synthesizing information	3. Ask students to analyze the problems (environmental, social, and economic) that different forms of energy create and record on chart paper. 4. Upon completion of analysis, have students choose an energy source that they think would be best to use in the future and write a story or report stating their choice along with supporting arguments.	
	MAY LESSON XXIX - Presenting Different Viewpoints	
Students will present their rationale for supporting the utilization of a particular form/source of energy to supply future needs	1. Invite another class or parents to listen to the reports prepared earlier where students give their reasons for selecting a particular formof energy. 2. This can also be presented as a forum for debating the pros and cons of different energy sources by dividing the class into teams - each arguing on behalf of a particular form of energy.	Student reports Evaluation Tool: Student debate
	LESSON XXX - Conservation of Energy	
Students will identify the many different ways in which energy can be conserved.	1. Have students discuss ways in which we, as individuals, can conserve energy. List on chart paper. 2. Have students make a class booklet on Energy Conservation by having each child contribute an illustration 3. Conduct a survey on energy conservation	Chart paper, drawing paper, crayons, magic markers Evaluation Tool: Student pictures
	LESSON XXXI - Careers Related to Energy	
Students will become aware of the range of jobs and careers related to energy by examining data.	1. Together with the class formulate a list of occupations and careers that are energy oriented by looking through magazines, newspapers, etc. 2. Have each student select a job or career that they might wish to pursue in the future and explain why. Suggest they conduct research on their own to ascertain what qualifications would be needed and what the work would entail.	

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES
GRADE: SECOND
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OBJECTIVES	PROCEDURES	MATERIAL
Students will conduct research on famous people who contributed to our knowledge of energy	LESSON XXXII - Reporting on Famous Scientists 1. Prepare a worksheet listing the names of scientists, along with a brief description of their contributions to the electronic and nuclear age. 2. Have students decide on the scientist they would like to research. 3. Share reprots when completed. 4. Create a circuit board or learning center where children can match the scientist with his/her significant contribution.	Teacher prepared worksheet Evaluation Tool: Student reports
Students will demonstrate what knowledge they have acquired pertaining to energy by completing a multiple choice test. Students will apply their knowledge to project the nature of our environment in the year 2500 in a composition	JUNE LESSON XXXIII - Evaluation 1. Administer a teacher - prepared multiple choice test. 2. Have students, in a written composition, describe their concept of what life would be like in the year 2500.	Evaluation Tool: A. Multiple Choice Test, B. Student Compositions

OBJECTIVES	PROCEDURES	MATERIAL
	LESSON XXXII - Reporting on Famous Scientists	
Students will conduct research on famous people who contributed to our knowledge of energy	1. Prepare a worksheet listing the names of scientists, along with a brief description of their contributions to the electronic and nuclear age. 2. Have students decide on the scientist they would like to research. 3. Share reprots when completed. 4. Create a circuit board or learning center where children can match the scientist with his/her significant contribution.	Teacher prepared worksheet Evaluation Tool: Student reports
	JUNE LESSON XXXIII - Evaluation	
Students will demonstrate what knowledge they have acquired pertaining to energy by completing a multiple choice test. Students will apply their knowledge to project the nature of our environment in the year 2500 in a composition	1. Administer a teacher - prepared multiple choice test. 2. Have students, in a written composition, describe their concept of what life would be like in the year 2500.	Evaluation Tool: A. Multiple Choice Test, B. Student Compositions

ENERGY RESOURCES

MONMOUTH COUNTY AUDIO-VISUAL AIDS COMMISSION
Campbell Court and Highway 9
P.O. Box 1264
Freehold, New Jersey, 07728-1264

RESOURCE FILMS:

Lesson 1	The Great Search	207718
Lessons 2 and 3	The Atom - A Closer Look	311686
	Learning About Liquids, Solids, and Gases	111308
	World of Molecules	303759
Lesson 12	Learning About Solar Energy	111077
LESSONS 14 and 15	Learning about electric Current	211292
	Electricity All About Us	211787
	Electricity, Electricity	112142
Lesson 24	Magnets, Magnetism, and Electricity	105325
Lesson 26	Learning About Nuclear Energy	211022
Lesson 27	Energy Sources of the Future	210168

RESOURCE BOOKS

Berger, Melvin - ATOMS - Coward-McGann, Inc., 1968

Blackwood, Paul - The Wonder Book of Electricity - Wonder Books 1969

Feifer, Nathan - Let's Explore Chemistry - Sentinel Publ., Inc. 1959

Jacobson, Willard - Science Activities for Children - Prentice-Hall Inc., 1983

Kerner, Ben - Electricity - Sentinel Publ. Inc., 1965

McCormick, Jack - Atoms, Energy, and Machines - Creative Education Society, Inc., 1967

Navarra and Zafforoni - Today's basic Science - Harper and Row 1963

Newing, F.E., Bowood, Richard - The Ladybird Junior Science Book of Levers, Pulleys and Engines Wills and Hepworth Ltd., 1963

Parker, Bertha - Electricity - Row Pereson and Co., 1958

Posin, Daniel - What is Energy - Benefic Press, 1962

Victor, Edward - Science For the Elementary School Macmillan, 1965

SUBJECT: THIRD GRADE SCIENCE - ASTRONOMY

I. GIFTED PROGRAM GOALS

II. GIFTED LEARNER OBJECTIVES

A. The student will develop an understanding of our solar system.

B. The student will utilize classification skills in ordering and sequencing data.

C. The student will utilize oral and written communication of data in appropriate form.

D. The student will utilize thinking skills in drawing logical inferences, predicting outcomes, and forming generalized statements.

E. The student will be invoved in research projects that require the use of many reference materials and will further develop research skills.

F. The student will create original products.

III. CONCEPTS

A. Our solar system is an orderly community of one star, nine known planets, at least thirty-six moons, thousands of miniature planets called asteroids, and billions of meteoroids and comets.

B. There are commonalities and differences between the nine planets.

C. Man has been studying the universe for hundreds of years.

D. Humans have traveled, lived in, and will continue to explore space.

E. The space station will be an orbiting multi-purpose system of manned and unmanned elements which will grow and change in response to research requirements.

F. Much of the technology generated by NASA's programs is being adopted for use in products and processes, providing important economic and social benefits.

G. When astronauts venture into the hostile environment of space, they must take everything they need to keep them alive and comfortable.

H. Humans will use space to solve problems on planet Earth.

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES

GRADE: THIRD

OBJECTIVES	PROCEDURES	MATERIALS
	SEPTEMBER LESSON I - Astronomy Introduction	
Students will develop an interest in the year-long study of astronomy. Students will generate a list of questions about astronomy Students will recognize his/her place in the universe Students will draw a picture of the solar system	1. Illustrate and use maps and a globe to show the concept of the places where man lives: a city, county, state, country, continent, hemisphere, Earth, Solar System, Milky Way, Galaxy, Universe. 2. Record on a chart questions about our solar system which students would like to explore this year. Save until end of year. 3. Have students draw the solar system and save for a comparison after they've studied astronomy all year.	Drawing paper, chart paper, films Evaluation Tool: Chart of student questions about astronomy. Student drawing of solar system.
	LESSON II - Solar System Introduction	
The student will: -understand what a light year is. -name the order of the planets. -explore the astronomy interest center -recognize that our solar system consists of nine planets, moons, comets, and asteroids which revolve around the sun	1. Teacher will give general background knowledge of the solar system and that distances in the solar system are measured in light years Light Travels at the rate of 186,000 miles per second Teacher will distribute notebooks to each child to record important concepts during the year in outline form. 2. Give sentence to remember names and order of planets: "My Very Educated Mother Just Showed Us Nine Planets". (Put in Notebook.) Homework: Learn order of Planets 3. Show film 4. Guide children to explore interest center of books and posters about the solar system. 5. Begin compiling a scrapbook of "Space News"	Student notebooks, Appendix films, Evaluation Tool: Student knowledge of order of planets, enthusiasm for interest center and scrapbook news.

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES
GRADE: THIRD
PAGE: 2

OBJECTIVES	PROCEDURES	MATERIAL
	LESSON III - Solar System Project	
	1. Using interest center activities and books from media center and public library, students will make a model of the solar system. Ex: poster, clay, paper mache models, mobiles; due in 3 weeks or so. Brainstorm ideas for ways to go about finding information for this project and the variety of ways that it can be presented.	Mercury - 1 inch Venus - 2.5 Earth - 2.75 Mars - 1.5 Jupiter - 29 Saturn - 24 Uranus - 10 Neptune - 9 Pluto - 1.25 Planet card 11 - Solar System Box
	LESSONS IV & V - The Sun	
Students will: Understand that the sun is the center of the solar system and that all bodies revolve around it	1. Discuss textbook pages with students for background knowledge of the sun and the student objectives listed.	Heath Science textbooks pp. 184-190 Student notebooks Solar System Box Sun Cards
Understand that because the sun is closer to earth, it appears larger and brighter than any other star. Contrast the relative size of the sun and earth. Compare the sun's size, color, and temperature to that of other stars. Describe how sunlight can harm the body. Explain why the sun is important to life on earth. Identify some uses of solar energy.	2. Encourage students to bring in news article, etc., about the sun and current events i.e. the greenhouse effect and solar energy. 3. Outline concepts in notebook. Extra credit: Make a sundial (provide examples at center) and bring in current events. 4. Show films 5. Allow students to watch the sun's path across the sky by recording the shadow it casts each hour. Chart results. Students interested in pursuing additional activities could: A. Brainstorm ways to save energy - posters, etc. B. Explore other sources of energy - geothermal, natural gas, hydroelectricity, fusion, coal, wind and nuclear. C. Design an energy efficient home. d. Write a story about what would happen to plants, animals and humans if the sun suddenly moved closer to the earth.	Films in appendix Stick with clay to place on playbround on a sunny day to record sun's path across the sky Evaluation Tool: Sundials, student notebooks

OBJECTIVES	PROCEDURES	MATERIAL
	OCTOBER LESSON VI - Day/Night and Seasons	
The students will: Understand that the axis is an imaginary line through the earth that the earth spins on, that it takes 24 hours for the earth to spin around once and it takes 365 days for earth to spin around the sun.	Using globes and students as sun and earth, etc., teacher will explain why we have day, night, and the seasons. Students will participate as much as possible and will outline important facts in notebook. Explain vernal and autumnal equinoxes.	Globes, flashlight (in darkened room)
	LESSON VII - Speaker	
Students will view a slide presentation on astronomy and participate in hands-on activities with a telescope.	Students will participate in a lecture/slide program about the Universe. Arrangements should be made for a night during the school year when students can view an interesting night sky through a telescope. Consult an almanac for the planets wheich will be visible in the evening this year.	Contact Monmouth County Parks System for the Universe I Slide Presentation
	LESSONS VIII/IX - Sharing of Solar System Projects	
The students will give oral presentations of their solar system projects.	The students will give oral presentations of their projects after a review of oral speaking techniques by the teacher.	Display areas for projects
	NOVEMBER LESSON X - Doing a Report	Odyssey magazines
The students will engage in independent study of planet of choice and create imaginative products to go along with their oral presentations. The students will formulate a hypothesis and reach a conclusion	Using the 3rd grade "Inquiry Process" guidelines, have students choose a planet or the moon to research and do creative projects for. This will prepare them for another independent learning activity later in the year on space exploration. Teacher will help students to fomulate the hypothesis (question) and reach a conclusion	Astronomy books and references Materials for student projects Appendix 1 - "Creative Planet Project" Inquiry process grade 3 skills
	LESSONS IX/XI - The Inner Planets - Mercury, Venus, Earth and Mars	
The students will understand the important concepts of the inner planets: Mercury Venus, Earth and Mars	Using one of the references, the teacher will discuss the four planets and outline these facts on the chalkboard for students to copy in their notebooks: Introduce the Heath Science Computer software and allow students to "command" missions to the various planets. Using Appendix 2 and large paper, have students fill in the information for each planet	Reference books Solar System Box Heath Science Software "Traveling Through the Solar Sy :m" Appendix 2 Large mural paper to chart the planets.

OBJECTIVES	PROCEDURES	MATERIAL
	DECEMBER LESSONS XII/XIII - The Outer Planets	
The students will:		
Identify the important characteristics of the outer planets: Jupiter, Saturn, Uranus, Neptune and Pluto. Compare likenesses and differences in properties of the planets.	Discuss the important characteristics of the outer planets and have students record information in their notebooks and on the large chart. Ask students to begin thinking about provocative questions for the team game in a few weeks. Chart similarities and differences: SAME reflect light rotate on axis satellites of sun get energy from sun DIFFERENT distance from sun speed of travel atmospheres etc.	Evaluation Tool: Successful completion of outline and comparisons
	LESSONS XIV/XV - Planet Report Oral Presentations	
The students will present their research report orally to the entire group	Allow ample time for students to share their oral and creative projects. Teacher will be particularly careful to look for the statement of purpose (introduction) and conclusion (original thoughts).	Evaluation Tool: Inquiry Process Teacher and student evaluations
	JANUARY LESSONS XVI/XVII - Planet Game	
The students will: Summarize and analyze all information presented thus far	Divide class into 4 teams to play this review game. Each class writes questions about the planets and sun. Two teams ask questions to the other two teams. Points are awarded for correct answers. The two teams with the highest number of points face each other in a run-off Teacher will videotape the event. Students will analyze their knowledge.	Video camera Evaluation Tool: Videotape of performance.
	LESSONS XVIII/XIX - The Moon	
The students will:		
Identify the facts about the moon's gravitational pull, its surface and rotation. Understand the phases of the moon.	The teacher will review the facts about the moon. For one entire month, the students will keep track of the moon's phases on a large chart in the classroom. Check the newspaper for times moon can be seen so students can observe during the day or at home in the evening.	Reference book on the moon. Chart paper Newspaper - moon phases

OBJECTIVES	PROCEDURES	MATERIAL
	FEBRUARY LESSON XX - Comets, Meteors, Meteorites, Meteoroids and Asteroids	
The students will be able to define the major characteristics of asteroids, comets, meteors, meteorites and meteoroids.	If transparencies are not available, teacher should try to draw pictures of these celestial bodies while describing them.	Astronomy resource books and transparencies
	LESSON XXI & XXII - Constellations	
Students will: Explain why constellations seem to move. Describe the Milky Way. Explain why the North Star can be used to find direction. Understand that constellations help astronauts locate Shuttle Navigation Stars Design a creative project on the topic of constellations	Teacher and students will use textbook pages to read out these facts: There are many activities students might want to engage in on this topic: 1. Hold a BIG Dipper contest. Students draw what they think the BIG Dipper stands for and then they write a story or legend. 2. Make a constellation viewer out of a box. 3. Invent a constellation. If a blank star chart (without standard constellations marked) is available, ask students to find star patterns that appeal to them and make stories to go along with them. 4. Have students investigate the stories attached to the different constellations and share with the class. A study of constellations can be incorporated into the art class (glitter constellation on black paper - student might want to choose his zodiac figure) and writing original myths in Language Arts	Heath Science Textbook pp. 191-201 Sky Challenger Wheels (Kit developed by Lawrence Hall of Science) available at museum and science stores or Astronomical Society of Pacific (see resources) Evaluation Tool: Student products
	LESSON XXIII - Independent Study	
The students will examine topics which they might wish to explore	Using Appendix 3, teacher will create an awareness of the many possible topics that students can study for the rest of the year. Students will begin their projects in a few weeks and will follow the inquiry process approach.	Appendix 3 Reference material
	MARCH LESSON XXIV - United States Exploration of Space	
Students will identify major programs in the U.S. exploration of space.	Divide students into 5 manned spaceflight program groups: Mercury, Gemini, Appolo, Skylab, and Space Shuttle. Have students find out information on each program: shortest and longest missions, launch and recovery dates, how many astronauts, and any other information	

OBJECTIVES	PROCEDURES	MATERIAL
	LESSON XXIV - cont'd.	
	Allow time for students to share information in groups. Have students make a timeline of our exploration of space.	Reference books about the U.S. manned spaceflights. Evaluation Tool: Group presentations, class timeline
	LESSON XXV - Space Station System	
Students will: Understand that the Space Station is a "system" and that microgravity presents unique problems. Students will compare living on Earth with living in space	The teacher wil explain that a Space Station will be a community and a complicated system like the students' own community (streets, building, people) List "helpers" in our community and discuss if these same helpers will be needed in space. Other topics to be discussed might be: The tight living quarters Space has no gravity to hold things down No need for furniture - most things built in Protective coverings are needed Preparing and eating foods is different than on Earth The disposal of trash presents problems. As students gain more background knowledge, have them show likenesses and differences between living conditions on Earth and in space.	Space Station books and posters
	LESSON XXVI - The Space Shuttle	
Students will: Describe the reusable parts of the shuttle. Describe the inside of the shuttle. Describe the jobs the shuttle will do.	Using various pictures, magazines, books, etc., point out the parts, appearance and functions of the space shuttle. Have students outline facts in their notebooks.	Resource material on the space shuttle.
	APRIL LESSONS XXVII & XXVIII - Jobs in Space	
The students will understand: That careers in aerospace are many and varied. That all the careers involve two important factors: proper preperation and training and a commitment to being a part of a team	Teacher will explain that while astronauts' jobs are scarce, there are many other important positions: engineers, technicians, scientists, and mathematicians. Divide the class into teams of three or four students and ask them to design and plan a space shuttle mission. 1. Select a name for a new space shuttle vehicle. 2. Develop a list of objectives for the mission. 3. Block out a time limit for accomplishing the objectives The group decides on who will be the engineer, artist, and technical writer. Each group will build a small	

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES
GRADE: THIRD
PAGE: SEVEN

OBJECTIVES	PROCEDURES	MATERIAL
	LESSONS XXVII & XXVIII cont'd. model of a space shuttle, decorate it with their crew insignia and give a presentation to the class. MAY LESSONS XXIX - XXXIV - Independent Study Students will choose their area of interest - research it, report on it, make a product to go with it, and present it to an audience.	NASA publications. Odyssey Magazines Aerospace Books Materials for building the shuttle: paper, tubes, wood blocks, glue, etc. Evaluation Tool: Group project presentation.

APPENDIX 1

CREATIVE PLANET PROJECT

The creative planet project consists of three parts: 1.) a written research report; 2.) a creative project; and 3.) an oral report.

1. Written Research Report: Using the format for a research report, write a report about your planet. Be sure to tell us what planet you are studying. Be sure to use a creative title and to use a title page, outline page, and bibliography in your written report.

   Here are some things you might want to include in your written report:

   A. The distance your planet is from the sun
   B. The distance your planet is from the earth
   C. The diameter of your planet
   D. The time it takes your planet to make a complete revolution
   E. The time it takes your planet to make a complete rotation
   F. The temperature on your planet
   G. The atmosphere on your planet
   H. The number of satellites your planet may have
   I. The surface of your planet
   J. Outstanding features of your planet
   K. Space flights to your planet? If so, how many? When? What was discovered?
   L. Any other information you might find that could be interesting.

2. Creative Project: Now be creative. You will not find this information in any book. You will have to use your imagination to do this part of the report. Using the suggestions below, be a creator for your planet. You must do at least 5 of these suggestions. Of course, the more you do, the better!!!! Good Luck! Oh, if you are REALLY creative and want to do something that is not on this "Suggestion" list, please see me. O.K.????

   A. Design a travel poster and brochure for your planet.
   B. You are on vacation on your planet and you must write a letter home to your parents - what will you tell them? Write the letter.
   C. Many of our stamps commemorate special events or honor special people - design a stamp for the envelope in which you will send your letter home.
   D. All countries have flags - draw a flag for your planet. Be sure to be able to explain what your symbols and designs mean.
   E. In the United States, we choose a person for President who is smart, brave, and knows how to make good decisions. What would the President of your planet be like. Write a paragraph describing him/her/it and draw a picture.
   F. On earth, we have dogs, cats, and other animals for pets. What kind of pets do they have on your planet? Remember, the climate and temperature. Describe the pets in a paragraph and then draw or "make" one.
   G. On earth, we have houses that can stand up under the weather conditions. Design a house that would be good for your planet.
   H. In school you learn reading, math, spelling, etc., so that you can be successful when you grow up. What kinds of things do they teach the younger creatures? Design their schools and tell me in a paragraph what subjects they teach and what each is about.

APPENDIX 1 cont'd.

CREATIVE PLANET PROJECT

I. You have different kinds of toys to play with. What do the younger creatures play with? Draw, design, and describe their toys.
J. People on earth eat foods that are good for them and those which they can get and grow. What is eaten on your plantt? Draw or bring us models of that food.
K. People on earth live in cities. Build a city that could be on your planet.
L. Create a newspaper for your planet. How would it be alike or different from one on earth?

3. Oral Report: Now prepare yourself to tell the class all about your planet. SPEAK LOUDLY AND CLEARLY.

INDEPENDENT TOPICS OF STUDY
FOR AEROSPACE HISTORY AND SHUTTLE SPACEFLIGHT

1. Aerospace History - Dr. Robert Goddard
2. Propulsion Fundamentals
3. Sonic Boom
4. Astronauts - selection and Training
5. Space Wordrobe
6. History of Manned Space Flight
7. Dr. Sally Ride
8. Johnson Space Center
9. Shuttle Transportation System (STS Space)
10. Tethered Satellite
11. Untethered Flight
12. Hubble Space Telescope
13. Appollo Missions
14. Lunar Samples
15. Components: Booster Command Modules
16. Skylab
17. Spacelab
18. Pioneer 10
19. IRAS: (Infrared Astronomical Satellite)
20. Space Benefits
21. Voyager Project
22. Newton's Laws
23. Asteroids
24. Meterors
25. Comets
26. Telescopes
27. Challenger Tragedy
28. Black Holes
29. Careers in Space
30. UFO

ADDITIONAL ACTIVITIES FOR GIFTED ASTRONOMY AND SPACE

1. Visit Hayden Planetarium at the American Museum of Natural History - 212-873-7320

   Visit planetarium at the Trenton State Museum - 609-292-6347

   Visit planetarium at the Ocean County College

2. Class project - make a game like Trivial Pursuit to donate to the media center.

3. Students compose poems to describe some aspect of the universe.

4. Keep a large folder of astronomy current events.

APPENDIX 2

CHARTING THE PLANETS

PLANET	SYMBOL	ROTATION	REVOLUTION	DIAMETER	MOONS	DISTANCE FROM SUN	ATOMSPHERE
MERCURY							
VENUS							
EARTH							
MARS							
JUPITER							
SATURN							
URANUS							
NEPTUNE							
PLUTO							

APPENDIX 3 cont'd.

ADDITIONAL ACTIVITIES FOR GIFTED ASTRONOMY AND SPACE

5. Students can write to major space agencies, universities, and authors requesting information.

6. Write a creative science fiction story about life on another planet in the future when we colonize space.

7. Take a trip to a private home or building which has a solar energy system.

8. Write to the U.S. Department of Energy or State Energy Department requesting information on the use of solar energy.

9. Students take on the roles of the planets, moon, sun, asteroids, comets and meteors. Planets have appropriate color/rings, etc. Everyone starts in a huddle, rotates, speeds up, etc. Try to space, rotate, and revolve corretctly. This could be an introduction to the solar system for younger students.

10. Design and fill out an application for "First Student in Space". Include education, qualifications. Attach a letter explaining why you should be on the next shuttle mission.

11. Write an imaginary conversation between an astronaut and Christopher Columbus.

12. Do a "lesson" from space.

13. Design a space suit for the 1st child in space.

14. Prepare a nutritional menu for a flight to outer space.

15. Make a picture dictionary of space words.

ASTRONOMY RESOURCES

BOOKS

Dennis B. Fradin, A New True Book - Spacelab, Chicago, Childrens Press, 1984

Dennis B. Fradin, A New True Book - Skylab, Chicago, Childrens Press, 1984

Roy Galiant, National Geographic Picture Atlas of Our Universe, Washington, D.C., National Geographic Society, 1980

Nigel Henbest, Spotter's Guide to the Night Sky, New York, Mayflowere Books, 1979

Dan Mackie, Hayes Technology Series - Planets and Galaxies, Niagra Falls, New York, Hayes Publishing, 1986

Dan Mackie, Hayes Technology Series - Space Tour, Burlington, Ontario, Hayes Publishing, 1985

R. Newton Mayall, The Sky Observer's Guide, New York, Golden Press, 1985

Ruth Radlauer, Voyagers 1 & 2, Chicago, Childrens Press, 1987

Straun Reid, The Usborne Book of Space Facts, Tulsa, Oklahoma, EEDC Publishing, 1987

BOOKS cont'd.

Gregory Richards, A New True Book - Satellites, Chicago, Childrens Press, 1983

Johathan rutland, The Planets, New York, Random House, 1987

Schulke and McPhee, Your Future in Space, New York, Crown Publishers, 1986

R. Conrad Stein, The Story of Apollo 11, Chicago, Childrens Press, 1985

PROGRAMS

THE YOUNG ASTRONAUT PROGRAM, P.O. Box 65432, Washington, D.C., 20036

THE UNIVERSE IN THE CLASSROOM, Newsletter free to teachers - write to:

TEACHER's NEWSLETTER DEPARTMENT
Astronomical Society of the Pacific
1290 24th Avenue
San Francisco, California, 94122

MONMOUTH COUNTY PARKS SYSTEM, UNIVERSE I AND II PROGRAMS

MAGAZINE

Oddyssey Magazine for Children

TEXTBOOK

Heath Science

COMPUTER SOFTWARE

Heath Science, Travelling Through the Solar System

KITS

Exploring Sea and Space, National Geographic Society

The Solar System, Box of Activity Cards, Educational Insights, 1975

FILMS - Available from Monmouth County Audio-Visual Commission

990361 - Beyond the Stars

111993 - Interplanetary Janet

212242 - Exploring Space - Beyond the Solar System

111256 - Exploring Space - The Sun and Its Energy

213279 - Solar Energy - HOw it Works

212221 - Exploring Space - The Moon and How it Affects Us

990023 - Comets: Time Capsule of the Solar System

SUBJECT: FOURTH GRADE SCIENCE - PALEONTOLOGY

I. GIFTED PROGRAM GOALS

II. GIFTED LEARNER OBJECTIVES

A. The student will analyze the process by which fossils are formed and construct model fossils.

B. The students will research and explore prehistoric life forms and will evaluate the factors that caused extinction.

C. Students will compare and contrast several theories about the extinction of dinosaurs to formulate an opinion.

D. Students will investigate and analyze the scientific classifications of dinosaurs.

E. Students will research and explore the impact of environmental issues on life and foumulate solutions.

III. CONCEPTS

A. Man can obtain knowledge about the earth's history through the study of fossils.

B. In order to survive, a society must be responsive to a changing environment.

C. Extinction results when particular life forms do not adapt to change.

D. Scientists study prehistoric life through their classifications.

E. Knowledge of the past, helps man survive in the future.

PALEONTOLOGY

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES

GRADE: FOUR

OBJECTIVES	PROCEDURES	MATERIAL
	SEPTEMBER	
Students will: Brainstorm questions and facts about prehistoric life. Explore and analyze models of fossils. Begin to compile a folder of Paleontology information and glossary (ongoing activity).	LESSON I - Introduction Elicit from students ideas about the definition of Paleontology. Discuss and conclude on a universal definition. Make a chart with the class listing questions and facts about the study of Paleontology Supply models of fossils for examination. Explain that these are the ways Paleontologists find out about the past. Tell that in a future lesson students will make their own.	Chart paper Folders Models of Fossils Vocabulary: Paleontology
	LESSON II - Fossils - Clues to Discovery	
Students will: Explore and analyze models of fossils. Record pertinent information in folders. Identify and analyze the formation of fossils.	Discuss with class and elicit ideas about the formation of fossils through observation of pictures. Through observation of pictures of rock strata label different types of rock and where fossils are formed. Students record information and vocabulary in Paleontology folder. Review process and supplies for personal fossil lesson to follow. HOMEWORK: Find a hard item to make a fossil imprint	Models of fossils Pictures of fossil formation Pictures of rock strata Vocabulary: Sedimentary, metamorphic, igneous, natural embalming, fossil
	LESSONS III/IV - Fossils	Models of fossils World Map List of places in the world where fossils have been found Picture of earth during Mesozoic Era Evaluation Tool: World map display Vocabulary: Pangea, coprolite, gastrolith
Students will: Identify and distinguish the types of fossils and how they are formed. Identify and analyze the continent formations. Expand information in Paleontology folders	Using models of the different methods of fossilization - discuss and categorize with students the four categories of altered fossils. Students record data in folders. Display pictures of the continent "Pangaea" and discuss how the land masses drifted. Provide information on location of dinosaurs in the world. On a world map diplay, have students indicate fossil locations Use finished product as a display. HOMEWORK: Questions for folder 1. Why are so few organisms preserved as fossils? 2. Explain why rapid burial in sediments provides us with the most abundant fossils. 3. What are the advantages of "natural embalming?" What conditions are needed for this to occur?	

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES
GRADE: FOUR
PAGE: 2

OBJECTIVES	PROCEDURES	MATERIAL
	LESSON V - Guest Speaker - Fossil Expert from County Parks System OCTOBER	
Students will: Create their own fossil imprint. Analyze and experience the process of fossilization.	LESSON VI - Making a Fossil Using clay to make the imprints students press a vegetable oil coated object into the clay and then pour plaster into it. The molds are set aside to dry in aluminum pans. When plaster is dried, the clay is removed and students have a personal fossil. Fossils may be a display for the class or the school Due to the weather, fossil hunt is scheduled for the end of the year.	Plaster of Paris Vegetable oil Aluminum foil plates Something to imprint Clay Evaluative Tool: Teacher observation and finished fossil
	LESSONS VII/VIII - Geologic Time	
Students will: Understand the concept of "prehistory" Explore and analyze the concept of geologic time using a time line Identify the geologic eras and life forms of those times Expand information in Paleontology folder	Discuss answers from Homework in Lesson IV Discuss the concept of millions of years. Present a sample of a time line or a chart in which geologic eras and periods are shown. Provide pictures of the different life forms which lived during these times - through questions and discussion guide students to deduce which life forms existed during specific eras. Time Line Project: (this is an ongoing work for about 2 to 3 weeks) Show film on Time Line Measure out to scale computer printout paper to represent length of earth's existence. Using a time line as a guide children work in groups at their free time to illustrate the time line from pre-Cambrian to present day. Time line may be displayed as sections are completed. HOMEWORK: Review notes in Paleontology folder. Concentrate on knowing the geologic eras, the periods known as "The Age of Dinosaurs", and the life forms that existed in specific time periods.	Geologic time line Chart of geologic eras and periods Computer printout paper Markers, pencils and crayons Vocabulary: Paleozoic, Mesozoic, Cenozoic, Triassic, Jurassic, Cretaceous, prehistory

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES
GRADE: FOUR
PAGE: 3

OBJECTIVES	PROCEDURES	MATERIAL
Students will: Identify and examine the classification of dinosaurs. Expand information in Paleontology notebook Explore the unique qualities that make a dinosaur	NOVEMBER LESSONS IX/XI - What is a Dinosaur? Review information about geologic eras and periods. Focus on the Mesozoic Era as "The Age of the Dinosaurs". Display a chart showing the four unique qualities that make an animal a dinosaur. Explain that the class will explore each area. Dinosaurs: 1. lived in Mesozoic Era 2. walked fully erect 3. lived primarily on land 4. skeletons possess unique features that classify them as dinosaurs. Using a display of the time line of geologic eras quickly review Paleozoic ("Ancient Life") and life forms present working to Mesozoic ("Middle Life") Display a chart of the periods of the Mesozoic Era and explore the first quality of what makes a dinosaur. Display picture of Dimetrodon. Explain that it is not a dinosaur because of rule 2 & 4. Rule 2 - Leg Structure Teacher will display pictures of leg structures. Students will observe and classify animals according to this feature. Rule 3 - Dinosaurs lived primarily on land Through the observation of various prehistoric animals, students will classify into groups according to the generalization (Rule 3). Rule 4 - Skeletal Structure Students will compare and contrast skeletal structures of various dinosaurs and classify them accordingly. Possible films for viewing at this time: Dinosaurs - A First Film Dinosaurs - Age of the Terrible Lizard.	Chart of four dinosaur characteristics. pictures films Vocabulary:Ornithischian saurischian

OBJECTIVES	PROCEDURES	MATERIAL
	DECEMBER LESSON XII/XIV - Finer Characteristics of Dinosaur Groups	
Students will: Define, interpret and appraise the qualities that classify dinosaurs Create a chart classifying specific dinosaurs into suborders Expand information in Paleontology folders	Teacher will present a chart of suborders of dinosaurs and discuss at length. Using materials, groups of students will analyze features and classify dinosaurs according to suborder. The students must be able to justify the classifications he/she chose. Homework: (Presented the first week - long range project due end of month) Choose a dinosaur and make a stuffed model. Prepare a brief presentation.	Books, pictures, encyclopedias, chart Vocabulary: Teropod, Sauropod, Prosauropod, Stegosaur, Ceratopsian, Anklyosaur, Ornithopod, Pachycephalosaur Evaluative Tool: Student made chart, Stuffed dinosaur and presentation
	JANAURY LESSONS XIV/XIVIII - Independent Research Project	
Students will: Recognize, interpret and create a research report on Paleontology using the inquiry process.	Teacher will assist students in formulation of a hypothesis. Class time is used to guide students through the process.	Research materials
	FEBRUARY LESSONS XIX/XXI - Habitat and Behaviors of Dinosaurs	
Students will: Define, examine, and appraise various dinosaur habifats. Recognize, explore, and assess the different dinosaur behaviors	Through the use of films/filmstrips, books and pictures, students will explore the habitats and behaviors of dinosaurs Teacher will guide the exploration of feeding, herding, defense, care of young. Create a "dinosaur behavior" series of bulletin boards. Groups of students are assigned bulletin boards labelled "Feeding Behaviors", "Herding", "Defense", etc., and, through artwork and interpretive writing, display what they have learned. Homework: You are a dinosaur veterinarian. What special equipment will you need? What might your office look like? What problems might you have? Illustrate your ideas.	Films, filmstrips, pictures, books Evaluative Tool: Bulletin Board Display
	MARCH LESSONS XXII/XXIV - Adaptation	
Students will: Define, examine and evaluate the aspects of adaptation and its link to survival. Explore, organize and assess the theories of dinosaur extinction Expand information in Paleontology folder	Using a labeled picture of Apatosaurus, class will speculate about adaptations and their use to the animal. Students will create a common definition of an adaptation. Provide students with sources to examine various animal habitats. Small groups will make up charts listing animal/habitat/adaptation/purpose. Provide books/pictures of dinosaurs - assign specific	

OBJECTIVES	PROCEDURES	MATERIAL
	(prehistoric animals and have small groups chart the adaptation of dinosaurs and prehistoric reptiles) Activity: Dinosaurs displayed a variety of structures that adapted them for survival. Have students create imaginary dinosaurs. They are to name their dinosaur and explain the special features that helped it survive.	Books, pictures, encyclopedia Vocabulary: Adaptation Evaluative Tool: Student made creature illustratin adaptations
	APRIL LESSONS XXV/XXVII - Extinction	
Students will: Recognize, examine and evaluate the theories of the extinction of prehistoric life Apply skills of debating. Recognize, examine and assess the causes of present animal extinction and endangerment Expand the information in their Paleontology folders	Have students brainstorm ideas about extinction. Provde materials for gathering information. Students will examine at length the different theories of extinction. Set up panels for class debates. Debates can be videotaped. Examine other animals that are extinct and endangered. Elicit reasons from the class about possibilities of extinction. Possible Projects: 1. Posters for display in the school alerting others to the extinction problem. 2. Collection of articles to display on endangered species. 3. Create a Hall of Endangered Species and invite classes to hear lectures. 4. A news program highlightin endangered animals. 5. A "reader's theatre" play (perhaps narrated by a dinosaur or endangered animal). 6. Correspond with wildlife organizations, governments, industry and newspapers.	Books, encyclopedias, video cameras Evaluative Tool: Finished student project
	MAY LESSONS XXVIII/XXXI - Human Survival and the Environment/ How can People Help Themselves and the Animals	
Students will: Examine and analyze modern evironmental problems threatening human survival Review, examine and appraise possible solutions to environmental problems and endangered animals. Expand information in Paleontology folder.	Using newspaper and magazine articles students will examine major environmental issues threatening life as we know it. Brainstorm possible solutions for discussion. Possible Projects: 1. Create slogans or commercials for filming to alert people of the enviornmental issues. 2. Panel discussion to tour classrooms. 3. Traveling displays to share with other classes.	

OBJECTIVES	PROCEDURES	MATERIAL
	4. Correspondence with industry and government officials. 5. Contact person from local Humane Society or Environmental Group as a guest speaker. 6. Daily announcements on school PA system. 7. Design pamphlets or newsletter for school distribution	Magazines, newspapers, books, paper, poster board, art supplies. Vocabulary: Acid Rain, Greenhouse Effect, Pollution, Deforestation, Ozone
Students will: Explore and assess fossil remains in their home state. Explain, employ and organize knowledge about fossils for student lectures.	JUNE LESSONS XXXI/XXXIII - Culminating Activities Arrange trip to local park or fossil bed. Students hunt for fossils and analyze. Arrange to borrow fossil samples (contact nearby college, park system or libraries). Students prepare lectures to share with other classes.	

ADDITIONAL ACTIVITIES

GRADE FOUR - PALEONTOLOGY

- Travel Agent of Ancient Time

  Students design posters and brochures for a trip during ancient times.

- Imagination Classification

  Using Greek and Latin scientific names, students create their own dinosaurs.
  1. Students can distinguish which name is real from a list compiled by teacher.
  2. Student can illustrate the dinosaur name they invented.

- Dinosaur Tongue Twisters

- Write a book on Dinosaurs for Young Children

- Take an Imaginary Trip Back in Time

  In a ship with observation windows. Choose a navigator, log-keeper, botanist, zoologist, geologist, hydro-scientist, meteorologist, writers, reporters, artists and astronauts. Keep a running log of discoveries and reactions of travelers. Prepare a report of the trip for television, radio, newspapers, lectures or a magazine.

- Visit to Geologic Museum

- Advertising Prehistoric Style

  Students are advertisers who have been hired to promote a product. Dinosaurs, or some aspect of dinosaurs' lives, must be the focal point of the ad. They can create slogans, posters, art work, and/or television commercials.

- Trivia

  Through individual research, children gather trivia facts for display and discussion. Some can create a game using the trivia

TEACHER RESOURCES

Sattler, Helen Roney. The Illustrated Dinosaur Dictionary, 1983, Lathrop, Lee and Shepard Books.

Sattler, Helen Roney. Dinosaurs of North America, 1981 Lathrop, Lee and Shepard Books.

Ranger Rick. Digging Into Dinosaurs. National Wildlife Foundation, 1983.

Benton, Dr. Michael. The Dinosaur Encyclopedia, 1984, Simon and Shuster.

Norman, Dr. David. The Illustrated Encyclopedia of Dinosaurs, 1985, Salmadar Books, Ltd.

Rhodes, Frank. Fossils: A Guide to Prehistoric Life, 1962, Golden Press.

SUBJECT: FIFTH GRADE SCIENCE - OCEANOGRAPHY

I. GIFTED PROGRAM GOALS

II. GIFTED LEARNER OBJECTIVES

A. The student will conduct extensive research into the problems facing our ocean and the importance of the ocean to life on earth.

B. The students will analyze the features of ocean waves, currents, ocean topography and natural resources from the ocean.

C. The students will compare and contrast and analyze ocean life on and near the shore, the continental shelf and the open ocean, and its interdependency with man.

D. The student will analyze and evaluate the ocean related careers which man has developed.

III. CONCEPTS

A. The ocean is a vital and necessary element for man's survival on earth.

B. The ocean has distinct features.

C. There is an interdependency between man and life in the ocean.

D. Mankind has developed many careers in which he studies and uses the ocean.

IV. COMMENTS TO THE TEACHER

Due to the outdoor nature of most of the field trips, the teacher may find it necessary to adjust the time and sequence of the trips.

OCEANOGRAPHY

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES

GRADE: FIFTH

OBJECTIVES	PROCEDURES	MATERIALS
	SEPTEMBER/OCTOBER LESSONS I, II, III	
The student will acquire an interest in the study of oceanography. The student will analyze and evaluate the importance of the ocean to life on earth. The student will conduct extensive research into a problematic area of oceanography.	Brainstorm with students all the facts they currently possess in regard to the ocean. List facts and discuss. Discuss and evaluate the benefits of living close to the ocean. Students will choose a topic which is a problematic area in oceanography. Using the inquiry process of research, the students will conduct a study, research and write a research report. Students should be given about two months to complete this work. An oral report will also be required upon completion of the project. To further introduce the study of oceanography to the students prepare them to view the films. Show films and discuss.	Films 1 & 2 Curriculum guide for the Inquiry Process. Evaluation Tool: Successful completion of: class discussion, research reports, oral report.
	LESSONS IV/V	
The students will identify the areas of the earth's surface that are covered with ocean water The students will evaluate some of the modern advances enabling people to explore beneath the ocean. The students will develop an understanding of the importance of oceanography as a new and vital scientific frontier.	Using teacher's manual and student text, read and discuss pages 191-195. Begin outline in Oceanography notebook. Discuss lesson checkup questions. View films 3 and 4, and discuss together. Portray a situation in which they could, in the future, live submerged in a research vessel. Discuss and evaluate with the students the exploration of the ocean and its importance for man's survival on land. View film 5 and discuss. Propose solutions to world problems that oceanography will help solve.	Textbook: Heath Science Level 5, 1985. Oceanography notebook Films: 3, 4, 5 Evaluation Tool: Successful completion of: Lesson Outline, Lesson Check-up Questions, Class Discussion.
	LESSON VI	
The students will analyze how the earth's ocean originated. The students will identify the source of most matter dissolved in ocean water and explain how it came to be located in the ocean. The students will analyze why mineral salts are left behind when water is evaporated from the ocean.	Using teacher's manual and student text, read and discuss pages 196-199. Continue lesson outline in notebook and discuss lesson check-up questions. Conduct experiment on page 197, "Matter in Sea Water". Discuss and evaluate results. View film 6 and discuss important concepts together.	Film 6 Textbook: Heath Science Oceanography notebook Evaluation Tool: Successful completion of Class discussion, Lesson Outline, Lesson Check-up questions, "Matter in Sea" experiment.

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OBJECTIVES	PROCEDURES	MATERIAL
The students will observe the effects of ocean waves on the shore. The students will evaluate their experience of the overwhelming power of the ocean. The students will gather sand, rocks, shells, and driftwood for class display and future experimentation	LESSON VII Students will be brought to the ocean to collect materials for future use and experimentation. Students will record observations of the ocean waves for later class discussion. Upon return from trip, students will make class display of ocean materials collected. Field trip evaluation forms will be completed and discussed	Bus Containers for sand, shells and driftwood. Field trip evaluation Evaluation Tool: Successful completion of class display, class discussion.
The students will compare and contrast the relationship between wind energy and most waves on water. The student will compare the movements of energy and water in an ocean wave away from shore and as it moves toward shore. The students will analyze a tsunami, identify its source of energy and tell why such waves are dangerous.	NOVEMBER LESSONS VIII/IX Using teachers manual and student text, read and discuss pages 200-205. Outline lesson concepts in oceanography notebook. Discuss lesson check-up questions. Discuss notes taken on "wave observations" during field trip. Prepare students for viewing film. Show film 7 and discuss important concepts. Research, in groups, actual case studies of tsunamis. Each group should be prepared to give an oral report.	Heath Science Oceanography notebook Film 7 Evaluation Tool: Successful completion of class discussion, lesson outline, lesson check-up questions, oral reports.
The students will orally present research findings to the class. The students will evaluate and appraise research findings.	DECEMBER LESSON X/XII The teacher will give each student ample time and opportunity to present to the class their research report which was chosen in Lessons 1 to 3. The remainder of the class will take notes and evaluate each student's report.	Student research reports. Evaluation Tool: Successful completion of research projects, oral presentations.
The student will analyze effects of the Gulf Stream on the local environment. The students will analyze how the differences in density caused by temperature or salinity can cause currents in the ocean. The students will identify warm and cold water currents found on the earth's oceans	JANUARY LESSON XIII Using teacher's manual and student text, read and discuss with students pages 206-209. Outline lesson concepts in oceanography notebook. Conduct experiment "Water on the Move" on page 207 and record observations. Discuss lesson checkup questions Prepare students for film. View film 8 and discuss important concepts together. Discuss the differences in cold and warm water currents. In groups students will prepare a world map illustrating at least 5 warm and 5 cold water currents found in the earth's oceans.	Heath Science Oceanography notebook Film 8 Evaluation Tool: Successful completion of class discussion, lesson outline, lesson checkup questions, map of cold and warm water currents.

OBJECTIVES	PROCEDURES	MATERIAL
The students will locate, identify, and describe the principal features found at the ocean's edge and on the ocean floor. The student will analyze the importance of each feature	LESSON XIV Using teacher's manual and student text, read and discuss pages 210-214. Continue outline in oceanography notebook. Discuss lesson checkup questions. In groups, the students will analyze the importance of each topographical feature. Show films 9 and 10 and discuss important concepts together.	Heath Science Oceanography notebooks Films 9 and 10 Evaluation Tool: Successful completion of class discussion, lesson outline, lesson checkup questions.
The student will identify, describe, and analyze the resources that can be recovered from ocean water and sediments found beneath the continental shelf. The students will analyze some of the problems of making ocean resources available.	LESSON XV Using teacher's manual and student text, read and discuss pages 215-228. Outline major concepts in oceanography notebook. Discuss lesson checkup questions. View film 11 and discuss important concepts together.	Heath Science Oceanography notebook Film 11 Evaluation Tool: Successful completion of class discussion, lesson outline, lesson checkup questions.
The students will describe the work of a Marine Zoologist. The students will describe animal adaptations to ocean environment	LESSON XVI Using teacher's manual and student text, read and discuss pages 224-227. Outline major concepts in oceanography notebook. Discuss lesson checkup questions. View film 12 together and discuss important concepts.	Heath Science Oceanography notebook Film 12 Evaluation Tool: Successful completion of class discussion, lesson outline, lesson checkup questions.
The students will analyze the characteristics of different organisms that live near the shore. The students will evaluate the importance of our beaches	FEBRUARY LESSON XVII Using teacher's manual and student text, read and discuss pages 228-230. Outline important concepts in oceanography notebook. Discuss lesson checkup questions. In groups, students will analyze the role our beaches play and their importance to man and ocean life. Groups will give oral reports. Some groups may wish to construct models of the beach. View film 13 and discuss important concepts together.	Heath Science Oceanography notebook Film 13 Evaluation Tool: Successful completion of class discussion, lesson outline lesson, checkup questions, group report.

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES
GRADE: FIVE
PAGE: 4

OBJECTIVES	PROCEDURES	MATERIAL
The students will identify and describe the varieties of marsh plants and marine algae. The student will identify the marsh plants of the Sandy Hook area.	LESSON XVIII Using reference materials discuss with students the widespread groups of marine algae, and plants found in a salt marsh. In groups, students will make display posters of marine algae. Other groups will construct models of plants found in a salt marsh, emphasizing the plants found in the salt marshes of Sandy Hook. Groups will display their projects in the classroom.	References: A. Seashores, p. 18-35 B. Our World in a Fishbowl, p. 29-32 Evaluation Tool: Successful completion of class discussion, group projects.
The students will examine the 5 major groups of ocean invertibrates and identify organisms according to each classification	LESSON XIX Using the outline of invertebrate groups, discuss each topic using reference book pages: A. Sponges - p. 45 B. C 1. Jellyfish - p. 46 2. Coral - p. 43 3. Sea Anemones - p. 42 C. Mollusks 1. Clams - p. 32 2. Scallops - p. 36 3. Oysters - p. 34/35 D. Arthropods 1. Lobsters & Shrimp - p.39 2. Crabs - p. 41/41 3. Barnacles - p. 38 E. Echinoderms 1. Starfish - p. 44 2. Sea Urchin & Sand Dollar p. 45 After class discussion of each classification students will illustrate organisms and their classifications through pictures mobiles and diagrams	References: A. Animals of the Sea Evaluation Tool: Successful completion of class discussion, group projects
The students will identify, classify and analyze shells. The students will identify the common shells found in New Jersey	MARCH LESSON XX Using teacher's manual and student text read and discuss p.230 Using reference books identify shells and discuss characteristics of shells found in New Jersey. In groups, students are assigned a New Jersey shell to illustrate and label for class display.	Heath Science References: Seashores, p. 84-136 20 Common Shells of New Jersey Evaluation Tool: Successful completion of class discussion, group shell projects.

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES
GRADE: FIVE
PAGE: 5

OBJECTIVES	PROCEDURES	MATERIAL
The students will analyze the importance of plankton in the oceanic food chain. The student will examine the process of photosynthesis. The student will diagram an aquatic food chain.	LESSONS XXI/XXII Using teacher's manual and student text read and discuss pages 231-235. Outline lesson concepts in notebook. Discuss lesson checkup questions. View films 14 and 15 and discuss important concepts. Students will create a class mural illustrating an aquatic food chain.	Heath Science Oceanography notebook Films 14 and 15 Evaluation Tool: Successful completion of class discussion, lesson outline, lesson checkup questions, class mural.
The students will analyze the changes that take place along the shore during the changes in tides. The students will identify how some organisms adapt to tidal changes.	LESSON XXIII Using teacher's manual and student text read and discuss pages 236-239. Outline lesson concepts in notebook. Discuss lesson checkup questions. View films 16 and 17 and discuss important concepts together	Heath Science Oceanography notebook Films 16 and 17 Evaluation Tool: Successful completion of class discussion, lesson outline, lesson checkup questions.
The students will analyze plant and animal life found on the continental shelf. The students will identify describe and diagram the structure of rockweed and kelp.	APRIL LESSON XXIV Using teahcer's manual and student text read and discuss pages 240-241. Outline lesson concepts in notebook. Discuss lesson checkup questions. Using reference book display pictures of kelp and rockweed. If possible, collect kelp and rockweed and observe air bladders. In groups, illustrate and label kelp and rockweed diagrams. View film 18 and discuss together.	Heath Science Oceanography notebook Reference: Seashore p. 28-30 Film 18 Evaluation Tool: Successful completion of class discussion, lesson outline, lesson checkup questions, models of kelp and rockweed.
The students will identify and describe the different animals that live in the open ocean. The students will research the particular characteristics of ocean animals	LESSONS XXV/XXVI Using teacher's manual and student text read and discuss pages 242-250. Outline important concepts in oceanography notebook. Discuss lesson checkup questions. View films 19, 20, 21, 22 and discuss. Students will select ocean organism to research and to present a model and oral report to the class.	Heath Science Oceanography notebook Films 19, 20, 21, 22 Evaluation Tool: Successful completion of class discussion, lesson outline, lesson checkup questions
The students will demonstrate a knowledge of a particular ocean organism by giving an oral report on the topic they have researched.	APRIL/MAY LESSONS XXVII/XXVIII The students, after choosing a particular topic, and researching the facts into that topic, will present an oral report to the class and a written project It is suggested that students bring in a "stuffed" organism as part of their project. Written reports should be in accord with teacher's specifications.	Student projects Evaluation Tool: Successful completion of written project, oral report.

GIFTED SCIENCE - SUPPLEMENTAL ACTIVITIES
GRADE: FIVE
PAGE: 6

OBJECTIVES	PROCEDURES	MATERIAL
The students will recognize the importance and necessity of careers involved in the study of the ocean. The students will analyze oceanography as a composite of many sciences..	LESSON XXIX Discuss the interrelationship of the different sciences involved in the study of oceanography. Using teacher's manual and student text read pages 219 and 251 and discuss the careers of Phillip Johnson and Jacquess Cousteau. View films 23 and 24 and discuss important concepts together. Suggested project could include further research into people involved.	Heath Science Films 23 and 24 Evaluation Tool: Successful completion of class discussion
The students will analyze the value of fishing as a career for man's survival The students will identify characteristics of game fish The students will discover the delights of seafood and analyze the techniques of packing and preparing seafood.	LESSONS XXX/XXXI *Discuss with students the importance of fishing as a career vital to man's survival Show film 25 and discuss important concepts together. Allow students to share fishing trip experiences. View film 26 and discuss important concepts dealing with seafood. Possible activities are: Having each student bring in seafood recipe for a seafood class cookbook. Bring students to a seafood restaurant to tour the restaurant and have a seafood meal. Research into the characteristics of certain gamefish: salmon, swordfish, founder, herring, tuna, cod and mackerel	Reference material: Animals of the Sea p. 12-16 Film 25, 26 Evaluation Tool: Successful completion of class discussion, completion of at least one activity.

OCEANOGRAPHY

MATERIALS

A. FILMS - all films may be obtained from the Monmouth County Audio-Visual Aids Commission

1. #207107 - MILLIONS AND MILLIONS OF BUBBLES
2. #204430 - MAN IN THE SEA
3. #310569 - MAN IN THE SEA
4. #202331 - PROJECT MOHOLE
5. #204624 - OCEANOGRAPHY: THE STUDY OF OCEANS
6. #211283 - DROP OF WATER
7. #203068 - WAVES ON WATER
8. #202044 - OCEAN CURRENTS
9. #303448 - EARTH BENEATH THE SEA
10. #300230 - CHALLENGE OF THE OCEANS
11. #207745 - STAKING OUT THE OCEANS
12. #104537 - ADAPTATIONS TO OCEAN ENVIRONMENT
13. #200251 - BEACH, A RIVER OF SAND
14. #202223 - PLANKTON
15. #105118 - FOOD CHAINS IN THE OCEAN
16. #212392 - LIFE BETWEEN THE TIDES
17. #214824 - ESTUARY
18. #207079 - SEA OTTER
19. #210341 - BREATH OF LIFE
20. #210432 - MAMMALS OF THE SEA
21. #310591- HUNTERS IN THE REEF
22. #101879 - OCEAN
23. #304391 - ENDLESS SEA SERIES, CAREERS
24. #103071 - MARINE SCIENCE
25. #206922 - FOOD FROM THE SEA
26. #212481 - SEAFOOD SPECIALTIES

BOOKS

1. Heath Science, Barufaldi, Ladd, Moses 1985: D.C. Heath & Company
2. Animals of the Sea, Conger and Cherr 1974: Golden Press
3. Seahorses, Zim and Ingle 1955: Golden Press
4. Our Wold In A Fishbowl, Cole and Gardella 1978: Instructional Development Laboratory
5. Secrets of the Sea, Mallan 1976: Arco Publishing Company
6. Twenty Common Shells of New Jersey, Cooper NJEA

ECONOMICS

RATIONALE

Economics, the study of how society allocates its resources, is a suitable course of study for gifted students. The necessity to wisely choose among the alternative uses of resources will be brought into the lives of the students through the examination of the principles of personal, community, national and global economics.

THEME

The theme of the student as a human resource, a producer as well as a consumer, flows through the six grades.

COURSE DESCRIPTION

Activities are planned at each grade level to have students actually experience operating a business or participating in mini-economies. Key concepts at each grade level are aligned with the district's social studies concepts and are articulated across grade levels.

KINDERGARTENERS learn that they are productive people in society by practicing division of labor and mass production in their Gingerbread Factory. They gain an understanding of organizing and operating a business when they open their Pancake Restaurant for a morning.

FIRST GRADERS learn about productive people in a community by planning a community and taxes, participating in Barter Village, and comparing different communities' economies. They evaluate the qualities of productive people and choose an area of self-improvement.

SECOND GRADERS advance to real money when they operate a cookie store for the entire school. They gain an understanding of supply and demand, profits, and factors that influence sales by practicing advertising techniques and doing a market survey.

THIRD GRADERS set up a classroom monetary system and hold a celebrity auction as they study the economic system and qualities of productive, famous people. They research public and private goods and services in their community and create original projects from their study.

FOURTH GRADERS focus on productivity in the world by organizing and operating a school store, participating in "Market and Command Systems Days" and analyzing advertising and wise consumerism.

FIFTH GRADERS study productivity and entrepreneurship from an historical perspective. They experience the higher level thinking skills when they analyze stock market information in the newspaper, solve the problems of how to invest their money and evaluate their progress weekly in the nationwide "Stock Market Game".

COMMENTS TO THE TEACHER

Approximately one weekly lesson or activity has been planned for the entire school year at each grade level.

EVALUATION

Student achievement in this course may be determined by teacher made tests, projects, homework and class participation.

SUBJECT: KINDERGARTEN ECONOMICS

I. GIFTED PROGRAM GOALS

II. GIFTED LEARNER OBJECTIVES

A. Students will discover things in nature that they can use to produce a product.

B. Students will become human resources when they use their own creative talents, energy, and labor to do work.

C. Students will apply consumer skills when purchasing products.

D. Students will apply knowledge of a business operation and simulate the experience.

E. Students will examine a product and analyze the labor and resources needed to create the product.

F. Students will experience the use of different mediums of exchange.

III. CONCEPTS

A. Human resources learn to use natural resources.

B. People become human resources when they use their own creative talents, energy, and labor to do work.

C. All of us depend on one another for the goods and services we cannot produce alone.

D. People need special skills to do a specific kind of work.

E. Members of a community produce the goods and services to satisfy their wants and needs (supply and demand).

F. People cannot have everything they need so they must make responsible choices to be wise consumers.

G. People's wants and needs require them to be productive.

H. People use money or another medium of exchange to obtain the goods and services they cannot produce.

I. Cooperative effort and division of labor combine to produce products.

J. People have different economic roles - sometimes consumer, sometimes producer.

COMMENTS TO THE TEACHER:

Coordinate lessons with other curriculum areas.

GRADE: KINDERGARTEN

OBJECTIVES	PROCEDURES	MATERIALS
OCTOBER Students will develop skills in problem solving. Students will discover things in nature they can use to produce a product. Students will become human resources when they use their own creative talents, energy, and labor to do work. Students will understand that nature provides us with natural resources	Lessons 1 - 4 "Nature is Resourceful" -Take children on a nature walk. As children pass through nature trail, they will make judgements about things they could use to survive in the woods. Children will collect leaves, sticks, wood, etc. Upon return to class room, discuss that their human resources, combined with natural resources will produce a new product. Students will use their collections to make a creative project of their choice -Children will brainstorm a list of natural resources. Teacher will record on a chart. -Children will experience the process of making "Sun" tea. Put "Sun" tea in direct sunlight to observe.	paper, crayons, markers, glue, etc. Evaluation Tool: Student project Chart paper, gallon jug, water, 10 tea bags. Evaluation Tool: Class made chart
Students will understand the difference between natural and man-made resources. Students will use their creative talents and skills to construct a model from resources.	-As children are enjoying "Sun" tea, served with sugar, ice, and lemon, teacher will illicit from students and make a chart of two lists differentiating natural and man-made resources needed to make tea. -Teacher will tell the story of "The Three Resourceful (little) Pigs". As the story moves along, teacher will ask children to distinguish different types of resources and classify into groups. -Divide students into 3 teams. Have one team collect grass to build a straw house. Ask another team to collect sticks for a wooden house and a third team to build a house of small plastic bricks. Teacher will assign one student in each team to make a little pig of clay to accompany each house.	Ice, lemon, sugar, chart paper Evaluation Tool: Class made chart Story - "The Three Little Pigs". Grass, sticks, plastic "bricks", clay, etc. Evaluation Tool: Teacher observation and student projects.
NOVEMBER Students will explore and gain an understanding of the first Thanksgiving.	Lessons 5 - 15 "Thanksgiving Feast" - coordinate activities with language, science, math, and art curriculum. -Teacher will explore with students the facts about the first Thanksgiving using pictures, books, etc.	Pictures, books, etc. Evaluation Tool: Student discussion

OBJECTIVES	PROCEDURES	MATERIAL
Students will make a comparative study of advancements in our economic system	-Brainstorm a list of food and supplies at First Thanksgiving and a list of food and supplies to be purchased for class Thanksgiving Feast. Teacher will record on charts. Students will compare methods for obtaining food then and now.	Chart paper Evaluation Tool: Class made chart
Students will make wise consumer choices by company prices.	-Students will review various supermarket advertisement fliers and compare prices of items to be purchased for feast. Students will select supermarket with best prices for class field trip	Supermarket advertisement fliers
Students will experience an actual supermarket shopping trip	-Field trip to a supermarket	
Students will use their creative talents to produce a product.	-Students will examine pictures of First Thanksgiving. With teacher's assistance, children will create Pilgrim and Indian costumes to wear at Feast. Allow 3 lessons to complete.	Fabric, white T-shirts, fabric crayons, markers, etc.
	-Students will create invitations for guests.	Paper, markers, crayons, scissors.
	-Teacher and students will prepare food for feast following recipes. Allow two days to complete.	Oven, recipes, pots, pans, spoons, turkey, stuffing, gravy, cranberry sauce, cornbread mix, sweet potatoes marshmallows, crushed pineapple, pie crust mix, apples, sugar, seasonings, etc. Evaluation Tool: Student projects
The students will develop creativity through role playing	-Students, teacher, parents and invited guests will simulate the First Thanksgiving Feast. Ask a parent to video-tape feast.	Evaluation Tool: Video-tape
DECEMBER/JANUARY Students will examine the product and analyze the labor and resources needed to create the product.	Lessons 16 - 24 "Gingerbread Factory" -Display a "Gingerbread Cookie" Brainsorm a list of ingredients supplies, and labor needed to make gingerbread cookies. Teacher will record on a chart.	Gingerbread cookie Chart Evaluation Tool: Class made chart
Students will understand that specialization and division of labor enable more efficient use of time, materials and skills.	-Discuss the concept of a factory - division of labor and that people need special skills to do a specific kind of work.	
	The following tasks must be completed to operate a Gingerbread Factory. -Students will choose the job they wish to perform at the Gingerbread Factory. Jobs include: rollers, cutters, or decorators, (teacher will bake cookies). Teacher will list on chart	Chart paper Evaluation Tool: Teacher observation, class made chart Ingredients and supplies for cookies.

GIFTED ECONOMICS - SUPPLEMENTAL ACTIVITIES

GRADE: KINDERGARTEN

PAGE: 4

OBJECTIVES	PROCEDURES	MATERIAL
	-Students and parents will volunteer to bring in items needed to make cookies -Enlist parent volunteers to assist on actual day of Gingerbread Factory.	
	-Students will create signs for jobs indicating rollers, cutters and decorators.	Paper, caryons, markers
Students will apply knowldge of an operation and simlate the experience	-Students will simulate an assembly line in the classroom. After cookies are made, children will wrap and distribute to others in school. Ask parent to video-tape.	Evaluation Tool: Video-tape
	*Note that we will continue with this unit upon return from Christmas vacation	
	-Recall and list knowledge gained about an assembly line procedure. Disucss the benefits and drawbacks of mass production.	Chart paper
	-Students will plan and create a way to communicate knowledge of an assembly line through posters, drawings, dramatization, etc.	Evaluation Tool: Student projects
JANUARY/FEBRUARY Students will gain an understanding of the factors involved in organizing and operating a business.	Lessons 25 - 35* "Pancake Producers" - Coordinate activities with language, art. -Students will make a field trip to a Pancake Restaurant and observe the division of labor, supplies, equipment, and menu needed to operate the restaurant. Students and teacher will take photographs of Pancake Restaurant employees involved in their jobs to use for future lessons. Upon return from trip, students will participate in discussion of operation of a Pancake Restaurant.	Still camera, film, video camera, and tape Evaluation Tool: Teacher evaluation of student responses during discussion.
Students will gain an understanding of division of labor.	-Students will brainstorm a list of jobs needed in operating a Pancake Restaurant and teacher will record. Jobs will include: waiters/waitresses hosts/hostesses cashiers (Parents will be the cooks)	Chart paper Evaluation Tool: completed chart

OBJECTIVES	PROCEDURES	MATERIAL
Students will develop an awareness of the factors needed to work cooperatively in a business situation	-Students will brainstorm a list of job responsibilities and teacher will record. -Teacher will set up a role-playing situation. -Students will discuss the food and supplies needed to develop a list of items to be purchased at the supermarket.	Chart paper
Students will make wise consumer choices by company prices.	-Students will recall how we reviewed supermarket advertisement fliers for Thanksgiving Feast. We will again review fliers and compare prices of items to be purchased. Students will select supermarket with best prices for class trip Students will discuss the benefits of using manufacturer's food coupons and will bring them in from home. -Field trip to a supermarket to purchase food and supplies.	Supermarket advertisement fliers Manufacturer's food coupons
Students will use their creative talents to produce a product.	-Students will create posters, advertisement fliers, menus, and invitations to promote restaurant.	Posterboard, paper, crayons, markers
Students will understand that uniforms serve a purpose.	-Students will review photos and recall uniforms worn by workers for their jobs. Students will create uniforms they will wear.	Construction paper, crepe paper, crayons, markers, glue.
Students will understand the meaning of a time schedule.	-Students will analyze scheduling and cost factors by: 1. # of seats 2. # of people to be serviced 3. how much time it will take to eat 4. how much money to charge to make a profit. (Money earned will be donated to charity) Teacher will record on a chart	Chart paper
Students will participate in a cooperative effort to produce a product	-Students will put into practice actual operation of class Pancake Restaurant. Teacher will take still photos. Ask parent to video-tape.	Evaluation Tool: photos, video-tape
	-Compare and discuss photos of Pancake Restaurant we visited and class Pancake Restaurant. *Students will create poster displaying similarities and differences.	Evaluation Tool: Poster
MARCH/APRIL Students will utilize a natural resource as a product.	Lessons 36 - 56 "Mother's Day Plant Sale" -Students will produce their product by growing plants from seeds.	seeds, potting soil, pots, garden tools

GIFTED ECONOMICS - SUPPLEMENTAL ACTIVITIES

GRADE: KINDERGARTEN

OBJECTIVES	PROCEDURES	MATERIAL
	-Students will observe and record growth by photographs	photos, chart paper
	-Students will package some plants attractively, while others will be left "unpackaged"	Cellophane wrapping, aluminum foil, wrapping paper
Students will analyze how the attractiveness of the product affects the sale.		
Students will use their creative talents to produce a product	-Students will create posters and advertisements for plant sale.	posters, paper, markers
	-Students will research prices of plants and decide upon prices for their plants.	Newspaper advertisements
Students will participate in a cooperative effort to produce a product.	-Students will experience the following jobs at plant sale: 1. Salesperson 2. Cashier 3. Record keeper	Evaluation Tool: Student-made display board of activity.
Students will gain an understanding of the use of a graph	-Students will construct graph to compare sales.	Poster board
		Evaluation Tool: Completed graph
MAY/JUNE Students will explore and gain an understanding of the factors involved in operating a class carnival	Lessons 46 - 56 "Carnival" -Introduce unit by reading a book about a carnival. Teacher will display several pictures of a carnival. Students will formulate a list of games, workers, food, etc., at a carnival.	Book, chart Evaluation tool: Completed list
Students will experience working in cooperative learning teams.	-Teacher will review rules and procedures for working in learning teams. Students will divide into teams working with parent volunteers to create games for carnival. Examples of games are: 1. bowling 2. bean bag 3. golf 4. fishing 5. etc.	Boxes, paint, paper, scissors, crayons, markers, etc. Evaluation Tool: completed games
	-After games are completed, students, with assistance of parent volunteers, will compose a list of directions for the game they have created.	Poster board, markers
	-Students will observe school all-purpose room and plan arrangement of carnival booths. With assistance of teacher, students will diagram arrangements on poster board.	Poster board, crayons, markers

GIFTED ECONOMICS - SUPPLEMENTAL ACTIVITIES

GRADE: KINDERGARTEN

PAGE: 7*

OBJECTIVES	PROCEDURES	MATERIAL
Students will develop creativity through role-playing. Students will realize that they have different economic roles-sometimes consumers, sometimes producers	-Students will role-play the following situations: 1. Explaining directions to the game they have created 2. As one student operates the booth, the other student will participate in the carnival.	Evaluation Tool: Teacher observation.
Students will understand the use of different mediums of exchange.	-Teacher will explain to students that we can use other mediums of exchange to obtain things. Teacher will illicit other examples from students i.e. bus tokens, coupons, tickets, etc. Teacher will explain that students will be given tickets after participating in game which can be exchanged for prizes.	
Students will use their creative talents to produce a product	-The morning of the carnival students will be responsible for making and bagging popcorn.	popcorn popper, popcorn
Students will apply knowledge of an operation and simulate the experience Students will experience trading options.	-Studen s will experience participating in and operating a carnival. Students will trade in tokens for prizes. (Prizes are to be donated). Ask parent to video-tape.	Games, food, tickets, prizes Evaluation Tool: Video-tape Student-made display board of activity.

GIFTED ECONOMICS

KINDERGARTEN

TEACHER/STUDENT RESOURCES

Films: (Available from Monmouth County A.V. Commission)

Economics - It's Elementary #100741

Economics In Action - #210136

Scrooge McDuck and Money - #211834

Why We Use Money - The Fisherman Who Needed a Knife-#10412

Making The Things We Need - #203257

Buy and Buy (VH) 900636

Choosing What to Buy (MP) 213072

Smart Shopper (VH) 901464

Wise and Responsible Consumership (MP) 207665

Video-Tapes: (Available from Monmouth County A.V. Commission)

Buyer Be Wise (VH) 990012

Filmstrips:

Story of Thanksgiving

SUBJECT: ECONOMICS - GRADE ONE - GIFTED

I. GIFTED PROGRAM GOALS

II. GIFTED LEARNER OBJECTIVES

A. The students will develop an awareness of human resources in the community.

B. The students will discover and analyze how taxes are used to operate a community.

C. The students will develop and apply organizational skills in city planning.

D. The students will analyze the qualities of a productive person and choose an area of self-improvement.

E. The students will assess their wants and needs in order to make responsible consumer choices.

F. The students will acquire a feeling of self-worth through the experience of saving.

G. The students will experience the use of different mediums of exchange.

H. The students will compare and contrast how people are productive in other types of communities.

III. CONCEPTS

A. People are a resource and they depend upon each other to do their job.

B. Governments collect taxes in order to provide public goods and services.

C. Responsible consumers make choices for spending and saving.

D. Economic systems require a medium of exchange.

E. Productive people can be found in many types of communities.

GRADE: ONE

OBJECTIVES	PROCEDURES	MATERIALS
SEPTEMBER The students will develop an awareness of human resources in the community The students will develop creativity through role playing.	Lesson I - Call For Help Students will participate in a discussion about jobs that help people in a community. Cards will be distributed to students showing either a person or a situation. One student will come forward and call on a telephone explaining the problem situation. The proper person must respond who can solve the problem.	Telephone, picture cards Evaluative Tool: teacher observation
OCTOBER/NOVEMBER The students will recall familiar places in town.	Lesson II - Mini-Town Students will brainstorm names of buildings, businesses, places, etc., found in a community.	Chart paper
The students will formulate ideas about how operations are financed	Teacher will go over the list and illicit from children that money is needed to operate these places. Children will formulate where the money comes from for each place. Example: Store - people buy things Hospital - patients pay This will lead to "Who pays for schools, fire department, policemen, etc.?"	
The students will gain an understanding of taxes.	A discussion will follow to examine the process of taxes. 1. What are taxes? 2. How are taxes collected? 3. What do we use taxes for? 4. How much tax money goes to schools, police department, etc.?	
Students will gain an understanding of a graph. Students will estimate proportions.	Lesson III - Mini-Town Students will observe a pie graph and learn how a whole is broken down into parts. They will apply this knowledge to estimate how taxes are distributed among the community services in our community.	Pie graph Ditto - divide pie graph
	Teacher will provide a list of community services and a sectioned pie graph. Students will estimate the tax portion used to finance each service.	Evaluative Tool: completed gra

OBJECTIVES	PROCEDURES	MATERIAL
Students will use a resource person to obtain information.	Lesson IV - Mini-Town Students will compose a class letter to the Mayor's office requesting a tax breakdown in their community. (When information is obtained, students will compare their estimates for accuracy).	Chart paper
Students will observe maps of communities. Students will formulate generalizations about city planning.	Lesson V - Mini-Town Teacher will display several picture maps of communities. Students will formulate ideas about the layout of a town. Example: 1. business district 2. residential area 3. school zones 4. recreational areas	Community picture maps
Students will experience working in cooperative learning teams. Students will apply knowledge to plan a town.	Teacher will review rules and procedures for working in learning teams. Students will divide into teams. 1. They will draw a plan for a town. 2. They will be assigned various buildings to construct	drawing paper
Students will create structures to be used in their model towns.	Lesson VI - Mini-Town Students will divide labor to accomplish the following tasks: 1. Transfer plan of city into large cardboard and paint. 2. Construct houses, buildings, bridges, signs, etc.	Large cardboard Boxes, oaktag, paint, markers
Students will review all tasks and evaluate their completed project.	Lesson VII - Mini-Town Students will complete towns by accomplishing the following tasks: 1. glue structures to cardboard layout. 2. name the town and make a welcome sign.	glue, paper
Students will make an oral presentation	Lesson VIII - Mini-Town Learning teams will display and give an oral presentation of their cooperative project.	Evaluative Tool: Model towns
JANUARY Students will analyze the qualities of a productive person.	Lesson IX - Star Store Discussion: What does it mean to be productive? What are some of the things people must do to be productive? How can we be productive in the classroom? How can you (personally) improve to be a more productive student? Teacher will record a resolution for improvement for each student on a sentence strip.	Sentence strip. Star stamp, stamp pad Evaluative Tool: Student resolution.

OBJECTIVES	PROCEDURES	MATERIAL
	Example: 1. James will organize his work area. 2. Chris will work quietly. 3. Sue will complete her assignments on time.	
Students will evaluate their personal traits and select an area of improvement.	The students will evaluate themselves each day and decide whether they earned a star for that day. The teacher will record the star on the sentence strip.	Evaluative Tool: Self-evaluation
Students will assess their wants and needs in order to make wise consumer choices. Students will experience the use of different mediums of exchange. Students will acquire a feeling of self-worth through the experience of saving.	At the end of each month, the students will cut out stars to be used as money. A store will be set up where students can trade stars for items. (Items in store can be school supplies) Students must use good judgement in selecting items they need. Also, a bank is established. Each student receives a bankbook to keep track of savings. Teacher will explain what interest is and will set a rate to use. Students will act as salespeople and bankers.	Store supplies (donated by parents) Teacher-made bankbooks
Students will develop an awareness of human resources in a community Students will assemble a model to show how many people are dependent upon each other in a community.	Lesson X - Chain of Workers Teacher will display a large picture of a school and explain that it takes many people to make a school operate. Students will brainstorm a list of workers who contribute to the operation. Each name is then printed on a strip and a chain is made of the strips and attached to the picture of the school. Application: Homework assignment. Draw a hospital and make a chain of workers who operate a hospital.	Picture, paper strips Evaluation Tool: Completed homework assignment
FEBRUARY Students will experience the use of a different medium of exchange via trading. Students will record data on a bar graph.	Lesson XI - Book Swap Students will plan and carry out a schoolwide book swap. The following tasks must be completed to operate the book swap: 1. Letter to parents and classes. 2. Advertisement posters 3. Book collection (one ticket per book) 4. Daily count of books -- to be graphed 5. Set up display of books 6. Schedule classes to come 7. Ticket collection.	tickets, poster paper, bar graph

OBJECTIVES	PROCEDURES	MATERIAL
MARCH Students will experience the use of a different medium of exchange via bartering	Lesson XII - XIV - Barter Village Teacher will present information to students about bartering throughout history. Students will cite examples of bartering. The following tasks must be completed to simulate Barter Village: 1. Students team up with a partner and choose a good or service to be bartered. 2. Students cut out pictures from magazines to trade at the store. 3. Students create a sign and name for their store. 4. Teacher makes headbands for students to wear stating their job. 5. Desks are arranged into a village type setting and stores are set up. 6. As bartering begins, one student operates the store as the team student shops. Then roles are reversed. Encourage students to role-play their parts.	headbands, magazines, poster paper. Evaluation Tool: 1. collage of items traded; 2. write an experience story about Barter Village
Students will develop creativity through role-playing		
APRIL/MAY Students will compare and contrast productive people of a different type of community	Lesson XV - XXX - Tribal African Community The following lessons are in conjunction with a Social Studies unit about Africa. Whole Class Activity After looking at pictures of African people working at various jobs in their village, students wil list similarities and differences to our community. Group Activities During the study of Africa, students are divided into four groups: 1. Food 2. Homes 3. Clothing 4. Geography Within the four groups, economics is studied through the following projects: Food Group Students acquire knowledge of types of foods eaten and how they are obtained. They learn that within the tribal community, the people must grow gardens, fish, and hunt. They experience making African food and woven fishing baskets	Pictures, chart paper Recipes, necessary ingredients Reeds, basket base

OBJECTIVES	PROCEDURES	MATERIAL
	HOMES GROUP Students acquire knowledge of the types of shelter used within an African village and experience constructing one of these homes from the natural resources available.	Large cardboard boxes, dried grass, bamboo, clay, sticks
	Clothing Group Students acquire knowledge of the types of clothing worn by the African people and how the clothing is made. Students will reproduce the cloth (tie dye) and jewelry of the African people.	Cloth, dye, clay, beads
Students will apply map skills and reference skills.	Geography Students will acquire knowledge of the land and what is produced and exported.	Maps of Africa, Dioramas Evaluation Tool: Completed projects (display for school and parents).

GIFTED ECONOMICS
GRADE ONE

TEACHER/STUDENT RESOURCES

FILMSTRIPS:

People Serving Your Community, National Geographic

An African Home - Near the Equator

FILMS: (Available from Monmouth County A.V. Commission)

Day in The Life of a Dollar Bill - MP-2-1194

Happy Helpers - MP-1-06367

I Want, You Want - MP-1-11806

Soopergoop - MP-2-11524

VIDEO TAPES: (Available from Monmouth County A.V. Commission)

Work Means - 900217

The Way We Live - 900224

People Need People - 900227

SUBJECT: ECONOMICS - GRADE TWO - GIFTED

I. GIFTED PROGRAM GOALS

II. GIFTED LEARNER OBJECTIVES

A. Students will illustrate the evolution of money as a medium of exchange.

B. Students will recoginze that many processes are involved in the production and marketing of goods through the application of these processes.

C. Students will demonstrate how division of labor on an assembly line is an efficient means of production through simulation.

D. Students will analyze the relationship between production costs and consumer needs and wants.

E. Students will evaluate the success of a business enterprise in terms of profit realized.

III. CONCEPTS

A. Economic systems require a medium of exchange.

B. Decision-making skills are needed when organizing a business.

C. Specialization affects human productivity.

D. Members of a community are producers as well as consumers.

E. Many factors influence economic growth.

OBJECTIVES	PROCEDURES	MATERIAL
SEPTEMBER Students will understand the evolution from "bartering goods" to money. Students will evaluate the effectiveness of using money as a medium of exchange. Students will record the value of all coins used in our monetary system.	Lesson I - History of Money 1. Show film "Why We Use Money" 2. Provide an opportunity for students to discuss the content of the film and to decide if money is more or less convenient as a medium of exchange. 3. Students will design a graph in order to show coin values	Film: "Why We Use Money" Evaluation Tool: Student responses during discussion, graph
Students will identify basic economic vocabulary/terminology. Students will demonstrate an understanding of the history of money through illustrations.	Lesson II - An Economics Vocabulary 1. Show film, "Scrooge McDuck and Money" which deals with the history of money. 2. Ask students to list in sequential order the important ideas presented in the film. 3. Follow-up activity is to illustrate the history of money in comic-strip format. 4. Evaluate student knowledge by using a teacher-prepared worksheet on matching terminology with the appropriate definition.	Film: "Scrooge McDuck and Money" Drawing paper Evaluation Tool: Teacher made worksheet
Students will analyze the kinds of problems they are likely to encounter when starting a business Students will think of solutions to problems	Lesson III - How To Start A Business 1. Show film, "Choosing What to Make" and have students describe the ideas presented. 2. Brainstorm the possibility of establishing a class business called, "The Cookie Store", which would serve the entire school population. 3. List problems as suggested by students 4. Think of possible solutions 5. Class to decide which solutions are more feasible.	Film: "Choosing What To Make" Evaluation Tool: Student responses regarding problems and solutions.
Students will understand and analyze the problems faced by suppliers Students will organize the running of a Cookie Store Students will discover the procedures for marketing and production used by actual businesses	Lesson IV - Managing a Class Business 1. Show film, "Supply" and then discuss how it applies to our situation. 2. Provide an opportunity for students to design the management and outline the procedures for running the "Cookie Store". 3. Assign class to a)clip coupons and ads for cookies from newspapers and magazines, b) collect simple cookie recipes from various sources, c)list the information found in the ingredient panels for several types of cookies	Film: "Supply" Evaluation Tool: Student suggested procedures for running a class businesss

OBJECTIVES	PROCEDURES	MATERIAL
OCTOBER Students will develop an understanding of the function of a market survey by having an opportunity to design one Students will assess the kinds of cookies to be sold by using a market survey	Lesson V - Designing a Market Survey Pose the problem of how we are to go about determining cookie preferences throughout the school. Record student responses and design a questionnaire accordingly. Place on ditto. Ask questions to decide if it is necessary to distribute the "market survey" to every student or would a representative sample provide the same results?	Evaluation Tool: Student designed questionnaire/market survey ditto
Students will organize and classify information. Students wil use information to draw conclusions and make generalizations.	Lesson VI - Organizing Data 1. Present the class with the completed questionnaires which number approximately one hundred fifty by distributing several to each student. 2. Ask students if they can draw any conclusions from the assorted data in front of them or do we need to first organize the information in such a way so that we can interpret it more easily and make generalizations? 3. Encourage students to classify the data into broad categories (i.e., vanilla-vs-chocolate, creme filled, nut or fruit flavored, etc.) 4. Having organized and classified the informational data, students should be able to draw conclusions and make some positive generalizations regarding cooking preferences.	Evaluation Tool: Completed market surveys
Students will evaluate the effectiveness of advertising techniques in the business world. Students will devise methods of securing merchandise. Students will establish job qualifications. Students will determine prices in order to make a profit.	Lesson VII - Effective Advertising Techniques 1. Ask students if they have observed ways in which stores or businesses have advertised and list on chart paper. 2. Which techniques seem more successful and why? 3. What must we decide before beginning our advertising campaign? a) how will we go about getting stock or merchandise (cookies). b) What prices will we charge c) how do we go about making a profit d) who will work the cookie store? e) what qualifications must they have f) when will we be ready to open for business	Chart paper Evaluation Tool: Student conclusions as to which are successful advertising techniques.

OBJECTIVES	PROCEDURES	MATERIAL
Students will make posters to advertise the cookie store	Lesson VIII - Poster Advertising 1. Have students list the information needed on their posters. 2. Ask what factors will make our posters an effective advertising tool? (i.e. size of lettering, color, illustrations, etc.) 3. Students will distribute their posters to all classrooms and ask permission to mount them on doors after briefly explaining the purpose of their visit.	Drawing paper, crayons, magic markers, masking tape. Evaluation Tool: Student Posters
NOVEMBER Students will review coin value by making change of a dollar. Students will review fractions by making equivalent fraction strips.	Lesson IX - Math in Economics 1. Show film, "Making Change of a Dollar". 2. Ask students to record the various ways change for a dollar was presented in the film. 3. Encourage students to suggest additional possibilities or alternatives not covered by the film. 4. Assign math text pages on coin values to reinforce. 5. Review fractional parts by completing math text pages on fractions. 6. Distribute "equivalent fractions worksheet" for student to label and cut into strips. 7. Demonstrate the difference between: a) ½ cup and 1½ cups b) ½ tsp and ½ tbs. 8. Administer teacher-prepared test in making change of a dollar and fractional parts.	Film: "Making Change of a Dollar" Equivalent Fraction Worksheet Complete math text pages dealing with coin values and fractions. Evaluation Tool: Teacher prepared test on coin values and fractions.
Students will read a recipe and list step by step the procedure to follow. Students will choose which ingredients and baking equipment to bring in.	Lesson X - Baking Preparation 1. Select one of the cookie recipes brought in by students that would be relatively simple to make in class. Copy ahead of time and distribute a copy to each student. 2. Have students differentiate ingredients from equipment and list in sequential order the steps they would follow to complete the recipe. 3. Divide class into three or four groups. Each group will be expected to bring in the items for baking. 4. One student should record the names of the students in the group and list the ingredients and equipment each has volunteered to bring in. Teacher should then compile a master list and determine if each group has accounted for everything that will be needed.	Cookie recipe Evaluation Tool: Sequencing of steps for a recipe

OBJECTIVES	PROCEDURES	MATERIAL
Students will distinguish between production of goods and provision of services by pictorial examples of each.	Lesson XV - Goods and Services 1. Have students draw or cut out pictures from magazines depicting the production of goods and the performace of services. Prepare a bulletin board display where children can mount their pictures under the appropriate heading. 2. Prepare a worksheet listing a person's occupation or profession. Children identify whether the person is producing a good or providing a service.	Drawing paper, crayons, magazines, scissors. Evaluation Tool: Teacher prepared worksheet.
Students will interview parents and grandparents to determine which occupations produce goods and which provide services. Students will determine if the nature of work in the community has undergone change over a period of time	Lesson XVI - Parental Occupations: Goods or Services 1. Have students interview their parents and other family members such as grandparents about their occupations and determine if they are producing a good, providing a service, or both. 2. What conclusions or discoveries were made regarding changes in the nature of work over a period of time?	Evaluation Tool: Student interview
Students will recognize the role they play or home and at school as providers of services.	Lesson XVII - Children as Producers 1. Have children illustrate and label picutres of themselves performing different types of services at home. 2. Ask children to illustrate and label pictures of themselves which depict the kinds of services performed in school	Drawing paper Evaluation Tool: student pictures
Students will recognize that all products come from resources in the environment by creating a pictorial display for a learning center	Lesson XVIII - Products and Resources 1. Students will develop a learning center with pictures and photographs of resources found in the school and community which are used for production and the products that result (e.g., cows and a bottle of milk, a tree and a wooden chair). 2. Encourage students to suggest various ways of classifying the resources. 3. Share with other classes	Magazines, drawing paper, camera/film Evaluation Tool: Learning center

OBJECTIVES	PROCEDURES	MATERIAL
Students will have an opportunity to become producers and suppliers of goods by baking cookies.	Lesson XI - Baking Cookies 1. After enlisting the assistance of several parent volunteers, each group will proceed to make batter for the cookie recipe selected. NOTE: Parent who is supervising the group will take the batter home to bake. 2. Provide for clean-up	Parent Volunteers Cookie Recipe Baking equipment and ingredients to complete recipe Evaluation Tool: Tasting Cook
DECEMBER Students will have an opportunity to run a class business by opening the cookie store to the school population. Students will reinvest profits to purchase new merchandise and have an opportunity to apply the concept of supply and demand. Students will make booklets to show the procedures followed for organizing and operating the Cookie Store.	Lesson XII - Operating a Business 1. Students will open the Cookie Store for business and sell the cookies they made. 2. Initially, since all the cookies are the same, price may vary depending on size. 3. Using the money collected the first day, purchase cookies from the supermarket using the results of our market surveys as a guide. 4. In order to set prices, students will use a calculator as follows: a) enter the cost of the package; b) divide by the exact number of cookies in the package; c) this will equal our cost; d) set a price that will be higher in order for us to make a profit. 5. Reinvest this profit to purchase additional merchandise. This will keep the cookie store operating continually as this procedure is followed over and over again. 6. Have students make booklets on how we went about organizing, managing, and operating the Cookie Store.	Student made cookies Calculators Purchased cookies Evaluation Tool: Student-made booklets on operating a class business
Students will develop an understanding of specialization by being given an opportunity to work on an assembly line. Students will analyze whether or not the division of labor on an assembly line was efficient.	Lesson XIII - Production 1. A holiday gift project such as Christmas cards or note paper can be undertaken by organizing several assembly lines and a control group. 2. Discuss efficiency of productivity in terms of specialization/division of labor. 3. Students decide what, if any, are the disadvantages to this type of production as opposed to individual production.	Drawing paper, magic markers, crayons, rulers, stencils. Evaluation Tool: Assembly line experience, products and discussion
JANUARY Students will observe how community resources are utlized to produce goods for consumption.	Lesson XIV - Trip 1. Take a trip to an asembly line facility such as a local manufacturing company to observe how goods are produced by a labor force derived from the community. 2. Have students complete field trip evaluation form.	Field Trip Evaluation form

OBJECTIVES	PROCEDURES	MATERIAL
FEBRUARY Students will be able to sequence the stages of production for various products.	Lesson XIX - Stages of Production 1. Students will sequence the stages of production from raw materials to final product in the hands of the consumer. For example, how is bread produced? a) wheat is planted; b) harvested; c) shipped to mill-ground into flour; d) baked into bread; e) shipped to stores; f) purchased by consumer. 2. Provide several sequences that the children can arrange in order. 3. Assign a finished product and have students sequence the steps in production starting with the raw material.	Evaluation Tool: sequencing stages of production
Students will have an opportunity to provide a service as well as produce a product by making a class directory for their parents.	Lesson XX - Class Directory 1. Have students list the following information on a 3 X 5 card: a) last, first, and middle name; b) home address; c) home telephone; d) parent's names; e) business telephone numbers. 2. Arrange cards in alphabetical order. 3. Reprint on dittos and run off enough for each child. 4. Cut and staple to form directories and present to parents	Index cards, dittos, stapler Evaluation Tool: Class directory
MARCH Students will recognize the difference between demands and wants by examining situations involving demands and wants.	Lesson XXI - Difference Between Demands and Wants 1. Define demands as the quantity of goods and services that consumers are willing and able to purchase at various prices at a given time. 2. Compare to wants which are unlimited, many of which we are unable and/or unwilling to buy. 3. Have students think of some general categories for which everyone has demand.	Evaluation Tool: Types of situation described by students.
Students will understand that more is consumed at lower prices and less at higher prices by comparison shopping	Lesson XXII - Cost Affects Consumption 1. Conduct a class survey to determine how many students would buy a cookie costing 25¢, 20¢, 15¢, 10¢, and 5¢. 2. The data should support the conclusion that more cookies will be purchased at lower prices and fewer at higher prices. 3. Is it more economical to purchase one cookie at 25¢ or 2 for 49¢?	Evaluation Tool: Class survey

OBJECTIVES	PROCEDURES	MATERIAL
Students will recognize the factors that influence demand and consumption	Lesson XXIII - Factors Influencing Demand and Consumption 1. Ask students to think of the things that affect our purchase of new merchandise for the cookie store. 2. Discuss the role played by income, price, time, taste, and professional advertising in consumption. 3. Have students sequence these factors from most to least significant.	Evaluation Tool: Student developed list of factors influencing consumption.
APRIL Students will recognize that the opportunity cost is the choice you give up in order for you to have your first choice - participating in decision making.	Lesson XXIV - Opportunity Cost 1. Have students draw pictures of resources and products that can be made by them. 2. Children will select a resource and decide on one product they would choose to produce from that resource. Have them determine their opportunity cost and production (their next best choice of a product to be produced from that same resource).	Drawing paper, crayons Evaluation Tool: Student analysis of alternatives when given a choice
Students will understand that consumers need to make wise decisions since there is not enough time or money to do everything they want	Lesson XXV - Scarcity 1. Children will draw a picture of what they want to do when they grow up and share with class. Have them also share their second choice (their opportunity cost) and explain why they didn't choose it. 2. Have the class respond to the rational presented by suggesting additional reasons as to why they would support or oppose the decision made by the student who is sharing.	Drawing paper, crayons Evaluation Tool: Student rationale of opportunity cost.
Students will understand and be able to depict examples of spillover costs and spillover benefits.	Lesson XXVI - Spillovers 1. Have students cut out pictures from magazines or newspapers to show: a) Spillover Costs: costs that result when some good or service is produced or consumed, but is not paid by the producer or consumer alone. Others help pay the cost; b) Spillover Benefits: benefits that result when some good or service is produced or consumed but are enjoyed by someone who does not pay for them directly; 2. Mount on charts or display on bulletin boards.	Magazines, newspapers, chart paper. Evaluation Tool: student pictures

OBJECTIVES	PROCEDURES	MATERIAL
MAY Students will examine the relationship between spillover cost and spillover benefits in the community.	Lesson XXVII - Spillovers 1. Pose the question of whether or not people should pay for something that they do not benefit from. How does this affect community resources? 2. Make a chart or matrix of the kinds of community transactions such as, pollution control devices, building of schools and hospitals, and maintenance of public property that lead to spillover benefits. Have students decide who pays and who benefits. 3. Have students formulate conclusions.	Chart paper Evaluation Tool: Conclusions formulated by students.
Students will ascertain how much profit was realized from selling cookies. Students will determine if the Cookie Store was successful by the amount of profit earned.	Lesson XXVIII - Calculating Profits 1. After the Cookie Store has closed for the year, distribute the money that is left to the students for counting. Place each student's tally on the chalkboard. Arrange in columns of five. Use calculators to add up each column (subtotals). Add all subtotals to find grand total. Subtract any expenditures. This amount is the profit made. 3. Have students decide if the Cookie Store was a successful business in terms of profit made.	Cookie Store money Evaluation Tool: Count money
Students will have an opportunity to become consumers by deciding on how to spend the money earned through the class business.	Lesson XXIX - Utilization of Profits Brainstorm ides for how to utilize the money (profit) provided by the Cookie Store. NOTE: Suggest a small portion be set aside for the following year in order to purchase merchandies.	Evaluation Tool: Student responses (factors used by students to arrive at a decision).

GIFTED ECONOMICS

GRADE TWO

TEACHER/STUDENT RESOURCES

Monmouth County Audio-Visual Aids Commission
Campbell Court & Highway 9
P.O. Box 1264
Freehold, New Jersey, 07728-1264

	FILMS	CATALOG NUMBER
Lesson 1	"Why We Use Money"	104012
Lesson 2	"Scrooge McDuck and Money"	211834
Lesson 3	"Choosing What To Make"	213073
Lesson 4	"Supply"	212401
Lesson 9	"Making Change of a Dollar"	212797

Resource Materials

Newsletter: "The Economist" newsletter published by: The National Center of Economic Education for Children, Lesley College, Cambridge, Ma., 02238

Pamphlet: "Economic Education Experiences of Enterprising Teachers", Volume 23, Edited by Andrew T. Nappi and Economic Education. From the 1984-85 entries in the National Awards Program for the Teaching of Economics, sponsored by the International Paper Company Foundation. jcee Stock No. 366.

Handbook: Choice: Suggested Activities to Motivate the Teaching of Elementary Economics. Author: Amway Corporation: Peter J. Meyers, Dr. George Vredeveld, et. al. Published by Educational Service, Inc. P.O. Box 219, Stevensville, Michigan, 49127

SUBJECT: ECONOMICS - GRADE THREE - GIFTED

I. GIFTED PROGRAM GOALS

II. GIFTED LEARNER OBJECTIVES

A. The students will establish a classroom monetary system.

B. The students will analyze how an economic system operates.

C. The students will analyze the qualities productive people possess.

D. The students will recognize themselves as productive resources in the economic community.

E. The students will assess wants, needs, and resources to make wise consumer choices.

F. The students will apply knowledge of the role of government in financing public goods and services by planning a community project.

III. CONCEPTS

A. Economic systems require a medium of exchange.

B. Money is always moving through the community from one place to another as people buy and sell things.

C. People get paid for the work they do and use the money to buy the things they need or want.

D. Human resources consist of the knowledge, skills and human energy embodied in the individual.

E. Wise consumers make choices for spending and saving.

F. As technology advances occupational opportunities become more advanced.

G. When we pay taxes we are paying our share of the cost of the things the government provides for the community.

OBJECTIVES	PROCEDURES	MATERIAL
SEPTEMBER The student will: -understand how the class monetary system will work this year designing a "dollar" for our medium of exchange	Lesson I - Introduction 1. Discuss earning money, saving money in a bank and then making choices on how to spend it. Students will have a class bankbook and will earn money in many ways -class jobs, contests, extra work for the whole year - being productive. 2. Challenge them to design a "dollar" which will represent our class this year. 3. Have students vote on best of the designs.	Dollar bills Evaluation Tool: Students' "dollar" design
Students will: -relate money to the concept of wages earned for services delivered. -create a name for our class "bank" -relate productivity to human resourcefulness	Lesson II - The Class Monetary System 1. Distribute bankbooks and "pay" students for a "job" they've done. Teach how to record the transaction in the bankbook. 2. Brainstorm ideas for a name for our bank and allow students to submit a name. 3. Students will vote on the name for our bank. 4. Discuss the concept of the student being a human resource that can be productive.	Class bankbook for each student. Evaluation Tool: Names submitted for class bank.
The student will: -develop a list of leaders and creative/ productive people from many fields of endeavor. -write letters to celebrities. -understand the qualities of leadership. -analyze why these people are considered leaders. -understand that a leader possesses or produces something poeple need or want. -apply background knowledge of setting goals, earning money, budgeting and spending money wisely in an auction experience	Lesson III - Celebrity Auction Project (Combine with letter writing and book report (biography) projects in Language Arts) 1. Discuss leadership characteristics in all fields - government, science, education, health care industry, business, and entertainment. 2. Develop a chart of these leadership qualities. 3. Explain "Celebrity Auction" °students will write letters to famous people asking for a donation to the auction; ° the main auction will be held at the end of the year; °a practice auction will be held one month from now using stickers, pencils, etc. (see Lesson 33 for discussion questions) 4. Ask students to write a paragraph on leadership qualities.	Letter writing materials Evaluation Tool: Letters to celebrities, biography book reports, student's paragraph on leadership.
OCTOBER The student will understand that: -people get paid for the work they do and use the money to buy the things they need.	Lessons IV/V - Introduction to an Economic System Show the filmstrip: "What Is An Economy" to the students. Stop the projector occasionally to discuss the concepts. Divide the students into groups of 3. Each group is responsible for drawing a picture showing:	Eyegate Filmstrip Poster paper, crayons

OBJECTIVES	PROCEDURES	MATERIAL
-Money is always moving through the community from one place to another as people buy and sell things. -Even when it is put in the bank the bank sends it back to the community again. -The system we use to pay people for their work and to buy and sell things, and to send money around the community is called an economy. -The student will contribute to a group drawing of pictures showing how money moves around the community.	1. A man purchases a shirt in a store after he is paid at work. 2. The storekeeper pays his bills - rent, electricity, telephone, workers and manufacturer. 3. The manufacturer pays his bills - materials, workers, insurance. 4. The Insurance Company pays out payments and workers' salaries. One of the workers is the man who bought the shirt in the beginning. 5. Bank - worker goes for a car loan. 6. Worker goes to a car dealership to buy a car. 7. Car dealer: a. buys cars b. sells cars for more money c. pays overhead - bills & workers. d. uses construction company to enlarge dealership. e. sells more cars f. factory makes more money, can expand and hire more workers g. money keeps moving around Allow time for students to share and disucss their group drawings and to compose a definition of an economic system.	Evaluation Tool: Student posters and definition of an economic system. Use all of the above to make a bulletin board display or mural for the school-wide community. List/drawing of people affected by a choice of product or service.
	Students will choose a good or service they want or need. They will list all the other people in the economic system that are affected by the choice and purchase of that product. Students will carry this idea further by choosing a job they want to do in the community. They will then list all the people/businesses that are affected by the students' job or career.	List/drawing of people/businesses affected by the profession/business choice of the student
OCTOBER/NOVEMBER The student will: -identify local businesses and professions -understand how people in business contribute to the community. -understand the difference between jobs that produce a good and those that provide a service.	Lessons VI/XIII - People in The Community This is a long-term project: 1. Have students develop a list of the different businesses in Long Branch. List the jobs that are performed in the businesses. Ask them to choose the business/profesison they would like to visit or interview. 2. Discuss which produce goods and which produce services. 3. Assign students the job of using the telephone book yellow pages to determine the number of businesses that produce the same good or service. Use the list of all busnesses and divide among students.	Local telephone book Interview questionnaire

OBJECTIVES	PROCEDURES	MATERIAL
-conduct an interview with pertinent questions. -create a project which states a preference for a job or career -understand that human resources are a community's most important resource -to recognize that the work one does is dependent upon skills, talents, knowledge and society's demands -to anticipate a future of choices, challenges and changes in jobs and careers	4. Discuss students' findings in the whole group. 5. Explain that students will interview community workers, develop a questionnaire, arrange the interview and report the findings. This would be a long-term project extending over several weeks and will require much teacher direction involving transportation and parental permission. 6. Students will share their interviews. 7. Students will state personal preferences about jobs and careers in a product of his/her choice (i.e., tape recording of interview, poster, mobile, diorama, creative story, play, report).	Evaluation Tool: Student interview questionnaire Student career preference project
DECEMBER The student will: -understand 6 steps to being a smart consumer -will apply consumer skills in writing a letter of complaint regarding a good or service	Lessons XIV/XV - Smart Consumers 1. Read booklet with students. list things a smart consumer does: a. budgets money b. knows products and services needed c. shops around d. reports problems e. saves receipts and warranties f. reads and follows product labels and directions. Relate these concepts to students' personal lives. 2. Students will compose their own letter of complaint using proper business letter form.	Contact a local county Department of Consumer Affairs for copies of a booklet on smart consumerism. Evaluation Tool: Student complaint letter.
-to create an awareness of poverty -vs- affluence	Lesson XVI - Holiday Wants 1. Discuss the poster pointing out that while many children in our country have many wants on their holiday gift list, there are many children who would be delighted with a bowl of soup and some rice. 2. Hold a discussion of this concept relating it to students experience.	Poster depicting the world cut in half - one side overflowing with toys, bicycles, computers, etc.; the other side is a bowl of soup with a spoon.
JANUARY The student will: -recognize that we use bills and coins as well as checks, credit and credit cards to represent money. -understand that with money in all its different forms we do the buying and selling that makes up our economy	Lessons XVII/XXIII - What Is Money? Show filmstrip B 1. Hold a classroom discussion using the following questions as guidelines: a. what do you think would happen if we tried to use the barter system today? b. why do you think people first started using checks? How is using a check the same as and different from using coins and bills?	Eyegate Media filmstrip: Introduction to Economics B - What is Money? Guest speaker from a bank

OBJECTIVES	PROCEDURES	MATERIAL
-understand that we organize the work we do, the things we make, and the money we spend into a system that helps us all make a living.	c. how is the use of credit cards helpful to the stores where they can be used? 2. Simulate a barter system experience from the fiewpoint of productivity of the human resource. Students will employ a skill they possess, advertise it, and trade services. Relate this back to question 1. of the filmstrip during a discussion of the barter experience.	Evaluation Tool: Students' discussion responses. Evaluation Tool: Group barter simulation. Student product comparing barter system to our present system.
The student will: -evaluate the barter system by comparing to our present monetary system through an independent product of the students' choice	Students will plan a way to communicate their comparison of the barter system to our present monetary system. Some choices might be: -poster/drawing -test for other students to take -creative writing story -play/skit Allow time for students to share their products.	Evaluation Tool: Student product.
MARCH The student will: -recognize that when we pay taxes we are paying our share of the cost of the things the governement provides for the community	Lesson XXIV - Government in a Community Show filmstrip and use the following questions to being a group discussion: 1. What are some of the things your families need that makes more sense for the government to provide? 2. Why do you think it would or wouldn't work for everyone in the community to get together and decide what everyone needed? 3. How is paying taxes another way of buying services? 4. Why do you think it is important to pay taxes to three different levels of government? 5. How does the government serve as a means of distributing and circulating money? 6. How does money paid in taxes for schools come back into the community?	Eyegate filmstrip F - Financing a Country
The student will: -understand that everyone has some involvement with the government in their community. -design and construct a personal shield symbolizing how they and their families are involved with the government	Lesson XXV - Government and Me Students will plan a shield with pictures or symbols representing how they and their families are involved with the government. Examples: I collect stamps - real stamp; Mom and Dad drive - picture of license plate; Dad's salary - police badge; I play in the park - drawing of a child in park; I go to school - picture of school.	Construction paper Evaluation Tool: Personal student shield

OBJECTIVES	PROCEDURES	MATERIAL
	Lesson XXVI - Government as an Employer in the Community	
The student will: -visualize the government's role as an employer in the community -compile charts of increasing complexity of grouping	Students will generate a long list of community workers. Examples: doctor, principal, highway worker, police officer, carpenter, mail deliverer. They will then put the jobs in 4 categories - private goods, private services, public goods, public services. Some jobs will go into several categories. Eventually students should be able to put jobs into local, state and federal categories.	Large pieces of chart or mural paper. Evaluation Tool: The complexity of the charts that students were able to compile.
APRIL/MAY	Lesson XXVII - Financing A Government	
The student will: -understand how a public good or service is financed. The student will evaluate the speaker/field trip experience	Use field trips/guest speakers to find out how the services are paid for and what the services are.	Guest speaker from City Hall, field trip to City Hall, post office or county/state park. Evaluation Tool: Speaker or field trip evaluation form.
	Lesson XXVIII - What Parks Provide	
The student will: -recognize the public goods and services available in the community. -explain how taxes benefit society. -compose an oral presentation to a selected audience	1. Display a large map of our state. Designate each state park with a pin and attach yarn leading to a short description of the park or state maintained memorial. 2. Have students write letters to the director of state parks and memorials requesting further information to share with the class and even the whole school. An assembly could be presented or students could act as guest lecturers presenting a program to individual classes in the school. 3. Discuss how these parks and memorials are maintained and financed (through taxes, entrance fees, income from souvenier sales, etc.)	State map, letter writing materials, brochures from National, State and local parks. Sandy Hook Gateway National Park. Monmouth County Park System City parks
	Lesson XXIX/XXXII - Design a Park	
Students will: -apply their knowledge of public goods and services in their community and how they are financed by designing their ideal park.	1. If students have not already visited a park to observe the public goods and services it offers the community, arrange such an experience. 2. Discuss and brainstorm a list of what the park provides for everyone (e.g. play equipment, picnic tables, barbecue pits, swimming pool, activities director, naturalist, tennis courts, baseball diamond, etc. 3. Divide the class into groups of 4 and have each group design its ideal park. On a separate piece of paper have them list	Drawing materials, model materials Evaluation Tool: Park design and description (Use in curriculum fair or school-wide showcase exhibit).

OBJECTIVES	PROCEDURES	MATERIAL
	the ways the community pays or would pay for all the facilities (taxes, concession stands, entrance fees, pool fees, etc.) Students could display this project at the gifted program curriculum fair or send it to the County Park System or City Hall.	
Students will: -demonstrate that consumers buy products which satisfy their personal desires. -understand that consumers with greater personal resources have a wider range of alternatives. -prioritize wants by allowing for alternate choices with an awareness of substitutes.	Lessons XXXIII/XXXIV - Celebrity Auction 1. Make students aware of auction items. 2. Review the practice auction held earlier in the year. Ask if student's goals changed after the practice auction. 3. Video-tape the auction 4. After the auction, discuss the following questions: a. did you get what you wanted? Why/why not? b. did you wait for a selected item? Was it a successful strategy? c. how will this experience prepare you for future auctions? d. as a consumer, did you make any mistakes? Explain. e. in considering the total tokens you had in hand for bidding, would you want to increase it? How? f. can you relate your experience doing jobs, earning money and buying things to the way consumers behave in the real world? g. did anyone arrange "credit" with another student? Who benefitted? Explain. h. did the income you earned from your job allow you to buy what you wanted? If not, how can you correct this problem before a future auction? 5. Have students complete a form dealing with these questions. 6. Analyze video-tape of auction.	Items donated by "celebrities" Evaluation Tool: Auction evaluation form Video-tape

GIFTED ECONOMICS - GRADE THREE

TEACHER/STUDENT RESOURCES

FILMSTRIP:

Introduction to Economics, (A,B,F) Kit 330
Eyegate Media
146-01 Archer Avenue
Jamaica, New York, 11435

COMMUNITY:

Monmouth County Park System
State Parks
City Hall
Businesses, Professional People

PUBLICATIONS:

Elementary Economist
National Center of Economic Education for Children
Lesley College
35 Mellen Street
Cambridge, Massachusetts, 02138

SUBJECT: ECONOMICS - GRADE FOUR - GIFTED

I. GIFTED PROGRAM GOALS

II. GIFTED LEARNER OBJECTIVES

A. Students will develop an awareness of the factors and skills involved in organizing and operating a business.

B. Students will explore, discuss and react to the need for advertising in a business.

C. Students will gain knowledge of the techniques and strategies used by the advertising industry and evaluate their effect on societies in the world.

D. Students will gain an understanding of the concept of profit.

E. Students will apply their understanding of strategies of business to the world market.

F. Students will develop an awareness that consumer choices have an impact on the market system.

G. Students will recognize, interpret and analyze the economic concepts of scarcity, factors of production and opportunity cost.

III. CONCEPTS.

A. Members of a nation produce the goods and services to satisfy their wants and needs.

B. People may depend on the goods and services from other geographical areas.

C. The availability of natural resources can affect people's choices.

D. Economic systems require a medium of exchange.

E. Responsible consumerism requires essential skills.

F. Competition influences what is to be produced, quantity of what is to be produced, and the price that can be charged for goods.

G. Work is essential for people to earn money to buy the goods and services they need and want.

GIFTED ECONOMICS - SUPPLEMENTAL ACTIVITIES

GRADE: FOUR

OBJECTIVES	PROCEDURES	MATERIAL
SEPTEMBER -Students will discuss factors involved in ordering supplies. -Students will understand aspects of running a school supplies store. -Students will create a name for the school store to be voted on by the class. -Students will understand the need for advertising.	Lesson I - School Store Show school supplies to students and discuss the following: 1. What new supplies need to be ordered? 2. How much money is owed to pay for present supplies? 3. Bills must be paid before a profit is seen. 4. Consider the school population's needs and spending money. 5. Will we need to advertise our store? Homework: Think up a name for the school store to be voted on by the group.	School store supplies from previous year Chart paper Evaluation Tool: Name for Sto
-Students will analyze different methods of advertising. -Students will determine which is effective advertising for the school population -Students will relate and devise a script for PA advertisement announcing opening of school store. -Students will understand the need for an advertising campaign -Students will experience the democratic process by voting for school store name -Students will explore, discuss, and examine advertising around the world to realize cultural differences influence types of advertisements.	Lessons II/III - Voting on the School Store/Advertising 1. Vote on a name for the school store using contributions from class. 2. Brainstorm with group different types/methods of advertising (TV, radio, jingles, commercials, news media and poster). Relate these to what will be needed for school store advertising campaign. 3. Discuss use of PA system as a means of reaching the school population/and the need for a "catchy" commercial message. Incorporate - A. Why do we advertise? B. What do we want to achieve? C. How do we get the attention of our audience? D. Do we need a slogan? 4. Break into small groups. Some will work on poster advertisement, other on suggestions for PA announcements. Later-groups will switch assignments so all have an opportunity. 5. Using magazines and newspapers from other countries, analyze the differences among these. Make magazines/newspapers available - children will collect samples for work on a collage. If available, show for discussion a video of TV advertisements from different countries. Homework: Use pictures collected to make collage - "Advertising Around the World"	Poster paper, crayons, markers Sample of advertisements from U.S. and other countries Evaluation Tool: Collage of advertisements

OBJECTIVES	PROCEDURES	MATERIAL
OCTOBER Students will: -understand how to make change -identify correct behaviors in dealing with customers	Lesson IV 1. Collect and display student collages with title, "Advertising Around the World". 2. Discuss manners and how to make customers feel happy to shop at our store. 3. Simulate actual school store business and have students practice making change. 4. Children can pair up while waiting their turn and practice making change or review the display of advertisements.	Enough coins and paper money for store simulation Evaluation Tool: Observation student activity
-Students will understand the record keeping involved with school store business -Students will gain an understanding of the concept of profit	Lessons V/VIII - Profit and Inventory 1. Discuss how "profit" will be made. Establish "markup" on items - and show process of developing profit. 2. Discuss inventory - its purpose and procedure. 3. Develop method for keeping track of bills. 4. Establish a record keeping device (chart) for inventory. At the end of the week, students in charge of the store will count items as part of their duties. This will be used to facilitate ordering. TEACHER NOTE: This is an on-going, year-long project. Class meetings will be held throughout the year to update advertising to re-order and to evaluate progress. Through October, meetings will be bi-weekly; November starts monthly meetings. Students will take photographs throughout the year for a "School Store" photo essay or display.	Chart paper, camera, film. Evaluation Tool: Student projects and end of the year.
NOVEMBER Students will: -realize and examine the impact of consumer demand and production. -define the term, "consumer" -assess the impact when consumer demand for a specific product drops to zero. -realize that priorities affect consumer purchases. -begin to compile notebook of economic terms. -discover that governmental bodies make economic choices for citizens	LESSON IX - "THE WONDERFUL TREASURE TREE" - Consumers and Demands 1. Give pre-test (ditto #13) and save for comparison. 2. Distribute worksheets 1 through 3. Using the sheets, discuss consumer demand and choices consumers make which reflect their needs and wants (consumer sovereignty, consumption and economic choice). 3. Discuss setup for glossary of economic terms - class will agree upon and record definition for "consumer". (Notebook will be on-going project throughout this study). NOTE: If materials are not available 1) teacher displays a picture of a tree containing many consumable items. 2) Students choose 3 items they would like to have. Record class data 3) Students name 3 things they consumed yesterday. Then 3 things a country would buy.	Economics Action Pack-McDonald's Ditto #13 Dittos 1 to 3 Economics Glossary Evaluation Tool: Teacher observation of student activity

OBJECTIVES	PROCEDURES	MATERIAL
Students will: -recognize and examine the concept of opportunity cost. -interpret and appraise why people must make economic choices. -identify and examine the economic concepts of production and goods/services . -explore, describe and analyze goods and services produced locally. -increase vocabulary in economics glossary	Lesson X - Opportunity Cost and Goods/Services 1. List new vocabulary words on the board. During class discussion of worksheets 4 and 5 put in key words to help define these terms. NOTE: If materials are unavailable, 1) students choose 2 more items from the tree; 2) From a given list of big TV prizes, students choose one item; 3) teacher displays pictures of goods and services. Students categorize them. 2. Students' discussion of these terms will yield common definitions for glossary (opportunity cost; goods/services). 3. Brainstorm with class a list of goods and a list of services available in our community. Disucss these choices. 4. Children will create a newspaper classified ad offering or requesting a goods/service item. Homework: Can you think of any goods or services that you provide at home or at school? Make a list of them.	EAM - worksheet 4 and 5 Economics Glossary Pictures of goods and service: Evaluation Tool: List of goods or services Children's newspaper classfied ad
DECEMBER Students will: -understand and examine that an economy runs on the buying and selling of goods, services, and labor. -explore the concept of trade with other countries. -recognize that when a community buys - it is sending money out. When a community sells it is bringing money in. -identify and examine the economic concepts of import and export -increase vocabulary in economics glossary	Lessons XI/XII - "What We Buy and Sell" 1. Briefly discuss homework assignment. Collect for evaluation. 2. View filmstrip, "Why We Buy and Sell". Discuss major concepts throughout the film. 3. Based on facts from filmstrip generate a discussion of items we buy from other countries. Incorporate: a) Brainstorm items that we get from other countries b) Why do we get these items from other countries? Are they produced here? c)Analyze ways that foreign products help or hurt the economy. Make a chart to illustrate ideas. Help - cheaper, makes more things available, more variety, more to choose from. Hurt - takes away business from U.S. companies, jobs are lost, costs can be more because of importation. 4. Enter terms "import" and "export" in economics glossary-discuss/agree upon common definition for the class Homework: Use magazines to find pictures of imported items. Pictures will contribute to class bulletin board.	Filmstrip: "What We Buy and Sell" Eyegate Media, Inc. (see resources) Chart or poster paper Economics Glossary Evaluation Tool: Teacher observation and magazine pictures for bulletin board

OBJECTIVES	PROCEDURES	MATERIAL
JANUARY Students will: -explore, interpret and distinguish between the four factors of production - LAND, LABOR, CAPITAL, and ENTERPRISE -increase vocabulary in economics glossary	Lesson XIII - "Four Factors of Production" 1. Collect pictures from homework for bulletin board display 2. Review/discuss/list on the board the four factors of production. Brainstorm with class common definitions of each for economics glossary. 3. As a group complete the work sheet activities on dittos 6 and 7. 4. Read/discuss ditto #8 - Enterprise - review puzzle activity which will be completed for homework. Homework: 1. complete puzzle on ditto 8. 2. write down your thoughts on these questions: a) Why is it almost impossible for a community not to trade with others? b) how can how we trade with other countries cause us economic problems in the U.S. NOTE: If materials are not available, 1. Teacher will present 4 land categories Forest- Farmland- Oil Well - Iron Ore. Students must name 3 items for each category that can be produced from that resource. 2. Teacher will present 4 labor categories Farmer, Factory Worker, Nurse, Writer. Students will list 3 goods or services each produces. 3. Teacher displays several pictures of capital (tools). Student must identify the worker who uses it. 4. Teacher will construct a pocket chart called Enterprise. 3 pockets will be labeled Land, Labor, Capital. Index cards will be distributed to students to place in proper pocket. (buy shelves, hire check-out person, pay wages, build store, etc.	EAP - ditto sheets 6, 7, and 8 Economics Glossary Pictures
Students will: -recognize and examine the principles of supply and demand -explore and evaluate the aspects of competition and how it affects purchases.	Lesson XIV - The Economy of the Community 1. View the filmstrip, "The Economy of the Community". Class discussion held will incorporate the following: a) If a business makes a big profit, what are some of the things it can do with its money? How are each of these things good for everyone else in the community? b) How is a family's budget like the economic situation of a country? c) Why is it often to our advantage to trade with other countries? Incorporate homework questions from Lesson XIII in class discussion. 2. List ideas on chart paper to post in the room.	Filmstrip: "The Economy of the Community" Eyegate Media, Inc. (see resources) Chart Paper Evaluation Tool: Chart of ideas Teacher observation of student discussion Newsletter article Essay

OBJECTIVES	PROCEDURES	MATERIAL
	3. Assign a group the topic of Economics for newsletter. Homework: Write an essay concerning this question- "Why is it almost impossible for a community not to trade with others"	
Students will: -recognize, interpret and inspect that because of scarcity entire societies must make economic choices. -increase vocabulary in economic glossary. -distinguish ways a society could determine what its economy will produce.	Lesson XV - Scarcity 1. Review activity on ditto #10 discuss aspect of Scarcity and how it influences choices. a) Who decides what the community needs? Brainstorm solutions to this question - list ideas on the board. 2. Discuss answers to homework question from Lesson XIV. 3. Brainstorm definitions for Scarcity - class votes and decides on definition to enter in glossary. Homework: Compile some ideas about the results of a ruler's decision to ban the production of automobiles. NOTE: If materials are not available: 1. Teacher will divide the class into 4 teams and provide each team with a tree with spaces. Students must suppose they are a country and choose ten things their country can have. They must decide how to agree. Voting? Choosing a leader to decide? Other? Groups will compare product.	EAP - Worksheet #10 Economics Glossary Evaluation Tool: Students' lists of ideas on "Ban of Production" Picture of tree
Students will: -discuss results of a ban on production, formulating an understanding of a result of scarcity. -recognize, interpret and distinguish the basic relationship between price and the quantity demanded	Lesson XVI - Scarcity/Price and Demands 1. Discuss students' response to homework question. List responses on the board and transfer to display paper. Title for bulletin board: Ban on Production. No More Autos Put children's ideas, printed on sentence strips, around this title. 2. Review/discuss aspects of price and sales surrounding the production of birdhouses illustrated in ditto #11. NOTE: If materials are not available: 1. Teacher provides a chart with information about # of items sold and price. Chart will reflect the generalization that - more items = lower price. Students will formulate this generalization.	EAP Worksheet #11 Evaluation Tool: Completed display of ideas Chart

OBJECTIVES	PROCEDURES	MATERIAL
FEBRUARY Students will: -define, practice, and calculate the economic concepts of total sales, total costs and profits. -identify and examine a) profitable level of production. b) the relationship between rising profits and increasing levels of production. c) the impact of rising costs of production on prices and input. -increase vocabulary in economics glossary	Lesson XVII - Prices, Profits and Production 1. Review and discuss the birdhouse company in ditto #12. Students complete the table to calculate sales and profits. 2. Discuss probable answers to questions posed on ditto #12. NOTE: If material is not available: 1. Teacher will provide students with a chart that contains the following information: price of item, number of items sold, total sales, total cost, profit. Students will analyze information to answer questions. Questions should contain situations to influence profits either rising or falling. Teacher Note: Lesson XVIII - to employ the publication, "What's the Difference?", which compares economic systems in 5 major world cities. This publication may be obtained by writing to: National Federation of Independent Business, 150 West 20th Avenue, San Mateo, California, 94403 (single copies are free)	EAP Ditto #12 Chart - teacher made questions
Students will: -recognize, interpret and inspect the differences between a market system (U.S.) and a command system (USSR) -students will increase vocabulary in economics glossary	Lesson XVIII - Market/Command Systems 1. Place a bag of treats (candy raisins, stickers, pencils, etc.) on a table (enough for the class). Point out that there are not enough items to provide all children with every thing they want. Students make suggestions on ways to distribute the "valuable and scarce" products. List student suggestions. (lottery, sharing, trading, etc.). Be sure the list includes an allocation system having one person decide who gets the items - and another allocation system where students must trade something of value for the individual items. (money or barter) Experiment to see how some of the listed allocation systems work. Ask the children if they like the results of the experiment - why, or why not? Be sure to experiment 1) with letting one person decide, and 2) with having individuals trade something of value to the owner (the teacher) for the desired item. After experimenting, students should say if each decision was made "with many people" or "with few people".	Teacher's section from, "What's the Difference" Bag of treats - enough for whole class Economics glossary

OBJECTIVES	PROCEDURES	MATERIAL
	Afterwards, the class should agree upon one method of distributing the treats and distribute them using the agreed upon procedure. At the end of the activity, tell the children that people in all countries must decide how to distribute their scarce and valuable items. Some nations decide by having many people involved in making the decisions. (i.e. U.S. market system). Some have few people involved (i.e. U.S.S.R. command system). All of these systems use money to assist people in allocating their valuable and scarce products and services. a) which system seems to provide more goods at lower prices? Which system did the children like best? 2. Discuss and agree upon definitions for the economic glossary: a) market system, b) command system, c) allocation	
Students will: -realize and examine the concept of worktime minutes and their use in purchasing power	Lesson XIX - Work-Time Minutes 1. Discuss earning of worktime minutes-explain that children will be producers of good work, for which they will be paid worktime minutes. With the input of the class, identify the specific jobs you will reward and establish the number of worktime minutes each is worth. Each student receives a "Job Completed Card" to record the jobs they have completed and the worktime minutes they have earned. At the end of the day - each "Job Completed Card" is exchanged for a check of worktime minutes. These will be used at the next lesson for purchasing items at the store.	3 X 5 file cards Teacher Guide for "What's the Difference" Evaluation Tool: job completed card for each student
MARCH Students will: -recognize, employ and experiment with the concept that people work to earn money to purchase the goods and services they need and want. -realize that priorities affect consumer purchases.	Lessons XX/XXII - Income Affects Purchasing Power 1. Create a classroom store containing paper cutouts of items from the chart. (What's the Difference?). Pupils will spend worktime minutes checks at the store. Explain that the store will take a trip around the world to the 5 major cities on the chart. Purchasing power will change according to location. (Moscow, Washington, D.C., London, Paris, Munich). Circle locations on the map.	Teacher's Guide for "What's the Difference" Magazine pictures of products, product wrappers Map of the world

OBJECTIVES	PROCEDURES	MATERIAL
	2. Instruct the students that their store will be "taking a trip" around the world. A few students will purchase items at the store with their worktime minutes-prices used on "What's the Difference?" chart. Children will keep prices paid for items in a log. Change the city as different groups come up to purchase. Continue this process until all the children have shopped and the store is in all five cities. Students will compare what they could buy with worktime minutes. Select one item to compare - using information found on the chart, discuss prices and how they affect the standard of living and people's choices. Discuss concepts of choice and opportunity cost by comparing what children have acquired with their worktime mintues. (How does income affect what and how much people can buy?)	Evaluation Tool: Teacher observation of activity and student discussion
APRIL Students will: -realize, apply and analyze that people attempt to maximize their level of satisfaction by seeking the lowest possible price for similar goods and services.	Lesson XXIV - Lunch Around The World 1. Students work in pairs. Five index cards are labled with the cities' names. Students choose a card to indicate which city they will use as a reference. 2. Students work in pairs to choose four food items to make up a nutritious lunch - using chart from "What's the Difference?" Children draw food items selected and calculate the price of the lunch. (Magazines can be provided to cut out pictures). 3. Have a representative from each group report to the class by showing the groups' luncheon plate and stating the cost in their assigned city. 4. Class discussion includes: a) would your group choose different foods, now that you know the worktime necessary to obtain them? b) what substitutions would you make?	Teacher's Guide for "What's the Difference?" Magazines Evaluation Tool: Lunch plate, teacher observation of discussion

OBJECTIVES	PROCEDURES	MATERIAL
Students will: -explore, discuss and assess that people can buy more goods/services by working more hours and/or by receiving higher wages for their work. -understand that people's material standard of living is based upon how much they can buy per hour worked.	Lesson XXV - Purchase Power 1. Display three to five consumer items that would be appropriate for the class. Students choose and draw the one item they would most like to have. After students have selected the item - display a chart which shows items wanted, minutes of worktime and the five cities. Students will analyze the information on the chart. They will come to the conclusion that buyers and sellers in markets can set prices as in the U.S. When prices are high, people ususally buy less or work more to earn enough income to buy what they need or want. DISCUSSION - Have students pretend they can buy their favorite item at a store in any one of the countries. Ask the students, in what city they would buy their item, and why?	Teacher Guide for "What's the Difference?" Pictures of items from chart Blank chart of cities to record worktime minutes for desired items.
Students will: -recognize and interpret that people evaluate other people, places and things based upon their own personal values as to what is best.	Lesson XXVI - Compare the Cities 1. Students are given a "gift" of 60 worktime minutes to spend in each of the five cities. 2. Each student is given a chart - heading indicates each city with a space for selected item and price below (total is 60 minutes in each city). Using the "What's the Difference?" chart students fill in by listing items they want to buy with their worktime gift. Total amount per city must be close to 60 minutes. 3. Class discussion of completed charts includes: a) similarities/differences between various prices in different cities; b) similarities/differences between student choices; c) make a note that consumer decisions are influenced by personal values and relative prices.	Teacher's Guide for "What's the Difference?" World map Blank chart of cities Evaluation Tool: completed student chart, teacher observation of class discussion.
MAY Students will: -understand and interpret that people choose to spend their money in a manner which gives them the highest level of satisfaction	Lesson XXVII - Worldwide Menus (may take 2 meetings) 1. Students will work in groups to design a dinner menu using food prices from the 5 cities. Pupils should weigh the costs as well as the benefits of choices. (Remind pupils that people ususally work 40-50 hours a week and each family's needs or wants vary) 2. Each group develops 5 menus (one for each city), records menus on paper, worktime costs and name of city. Groups report to class. 3. Take pictures of groups working for display. 4. Display menus and "What's the Difference?" chart	Teacher Guide for "What's the Difference?" Evaluation Tool: Completed menus Camera/film

OBJECTIVES	PROCEDURES	MATERIAL
Students will: -understand procedures for earning/accumulating classroom currency for upcoming "Pure Market" and "Pure Command" Days.	Lesson XXVIII - Earning Power 1. Display a chart listing characteristics of a Pure Command System and a Pure Market System. Discuss differences and introduce idea of "Pure Market Day" (see following lessons) 2. Continue discussion to elicit methods for earning money to spend during Market/Command Days. Students will earn money during the following 3-5 school days. This money will facilitate their participation.	Teacher Guide for "What's the Difference?" Chart of system qualities Evaluation Tool: Teacher observation of discussion
Students will: -realize, practice and evaluate the performance of different economic systems which can be judged by the criteria of efficiencey, equality, stability and growth.	Lesson XXIX - "Pure Market Day" 1. "Pure Market Day" begins by auctioning desks to be used for the day. Students may buy more than they need to rent or sell to others. All classroom materials should be distributed through an agreeable exchange between buyer and seller. (the teacher need not be the only seller). 2. Using play money earned, students can buy and sell privileges and services of others, such as hall passes and tutoring. 3. At the end of the day, class discussion is held geared toward children's impressions. Homework: Write down your ideas about "Pure Market Day". Think about it using ideas about: equality, stability, freedom, and standard of living. Ideas will be used for an article in the Student Newsletter.	Teacher Guide for "What's the Difference?" Play money Vidoe and still camer and film Evaluation Tool: Video, photo essay, student writing
Students will: -realize, practice and evaluate the performance of different economic systems which can be judged by the criteria of efficiencey, equality, stability and growth.	Lesson XXX - "Pure Command Day" 1. Begin the "Pure Command Day" by having pupils hand in all classroom materials to a central authority. The central authority then assigns seats and loans the classroom materials according to the authority's own standards. The authority can require and set a rental fee from the pupils if desired. All reasonable decisions for the day must be made by the central authority. (Little or no input from class is allowed) 2. Class discussion evolves around impressions of children incorporating comparisons of the two economic systems. 3. Both market/command day activities will be videotaped for evaluation purposes.	Teacher Guide for "What's the Difference?" Camera and film Video

OBJECTIVES	PROCEDURES	MATERIAL
JUNE The students will: -evaluate the school store experience through a product of his/her choice.	Lesson XXXI - School Store Evaluation 1. Students will discuss the school store experience and calculate the profit they have realized. Students will choose a project of their choice, working in small groups. Examples: photo essay, Curriculum Fair display, oral presentaiont, booklet on how to operate a business venture, charts listing steps in operating a business.	Evaluation Tool: student projects
Students will: -create a project using economics glossary compiled during the year.	Lesson XXXII - Economics Glossary 1. Each student using their economics glossary will choose a project to create: a vocabulary test, a word search, a crossword puzzle, a jumble word, matching game.	paper, markers, crayons, rulers. Evaluation Tool: student made: vocabulary test, word search, crossword puzzle, jumble word, matching game

GIFTED ECONOMICS

GRADE FOUR

TEACHER/STUDENT RESOURCES

Filmstrips -

Introduction to Economics (A,B, F) Kit 330
Eyegate Media, Inc.
146-01 Archer Avenue
Jamaica, New York, 11435

EDUCATION PACKETS -

"What's The Difference?"
The NFIB Foundation
(National Federation of Independent Business)
P.O. Box 7515
San Mateo, California, 94403

Economics Action Pack
MacDonald's Corporation

SUBJECT: ECONOMICS - GRADE FIVE - GIFTED

I. GIFTED PROGRAM GOALS

II. GIFTED LEARNER OBJECTIVES

A. The students will set up a modified stock market system within the classroom.

B. The students will analyze and assess the operation of the stock exchange system.

C. The students will evaluate the choices of long-term and short-term investments.

D. The students will evaluate from a historical perspective, how entrepreneurs have contributed to society.

E. The students will analyze and evaluate the present methods of taxation.

F. The students will assess the need for creative competition in the marketplace and the need for responsible consumerism.

III. CONCEPTS

A. The stock exchange system is an essential segment of our society.

B. Responsible consumers purchase goods and services in a variety of ways and from a variety of sources.

C. Risk-taking and imagination are necessary elements in our economy.

D. An understanding of the taxation system provides us with the basis for making sound economic decisions.

COMMENTS TO THE TEACHER:

-Order of lessons in January or February may need adjustment in order to coincide with the weeks in which the Stock Market Game is played.

-Research reports may be in the form of written reports, graphs, charts, illustrations, videos, murals, role-playing, bulletin boards or posters.

OBJECTIVES	PROCEDURES	MATERIAL
SEPTEMBER The students will: -recognize and evaluate the different methods of investment -recognize how the Stock Market fits into the investment world. -begin to create an Investment Glossary Booklet. -compare and contrast the different methods of investment that their parents use. -discuss and evaluate concepts in film	Lessons I/II 1. Discuss the term, investment and write a class definintion. 2. Discuss the different types of investments that are available and where and how they fit into the investment world; stocks, bonds, property, IRA. 3. Define together the following "investment" words: assets, beneficiary, collateral, commission, compound interest, depreciation, liabilities, title. 4. Form a booklet entitled: "An Investment Glossary"; write the words discussed with a definition. 5. Discuss words with parents asking for examples of family investments. Write a short report; share information with the class 6. View film and discuss important concepts together.	Individual glossary booklets short report on parents method of investment Film #1 Evaluation Tool: Successful completion of: Part I of the Investment Glossary and class discussion on family investments.
OCTOBER The students will: -analyze what it means to hold stock. -compare and contrast the 2 principal classes of stock -understand the historical aspects of the stock exchange and create an outline or timeline of the historical developments. -examine and appraise the operation of an actual stock exchange	Lessons III/IV/V 1. Discuss the definition of the Stock Market and stocks. Use examples of 2 firms to discuss the different classification of companies. 2. Discuss the benefits of a stock holder. Introduce the 2 principal classes of stocks and discuss the definition and benefits of each. Give examples 3. Discuss the historical developments of the stock exchange Develop an outline tracing the major developments. 4. Take students on a field trip to the New York or American Stock Exchange. 5. Students will do research reports on key people who have contributed to the development of the stock market as it is today.	Brochures and booklets from the New York and American Stock Exchange. Reference books on the Stock Market and stocks. Field trip to a stock exchange Evaluation Tool: Successful completion of: Historical outline and research reports
NOVEMBER The students will: -define words closely associated with the operation of the Stock Market and continue work in the Investment Glossary Booklet. -illustrate technical words and relate them directly to the operation of the Stock Market. -understand and analyze the role of a stock broker and brokerage firm. -examine and evaluate the operation of a brokerage firm.	Lessons VI/VII 1. Using the "Investment Glossary" begun in Lessons I/II discuss and define the following stock market words: AMEX, Bear Market, bid-price, blue chip stocks, brokerage firm, Bull Market, Common Stock, Floor, Market Order, NY Stock Exchange, Penny Stocks, rally, split-stock, stockbroker, ticker tape, Wall Street. 2. Students will illustrate the above words creating posters or bulletin board. 3. Discuss the role of the stock broker in relationship to the investor. 4. Visit a local brokerage firm or invite a stock broker to come in and speak to the students on his profession.	Reference books on the Stock Market. Local stock broker or brokerage firm. Evaluation Tool: Successful completion of: Part II of the Investment Glossary, bulletin board and poster display, role play and outline of the work of a stock broker

OBJECTIVES	PROCEDURES	MATERIAL
	5. Students will role-play, illustrate, or outline the work of a stock broker.	
DECEMBER The student will: -analyze information from the financial pages of a newspaper -describe the method for reading the stock tables published in a daily newspaper. -analyze a specific company's progress on the stock exchange for one month through charts, graphs, and reports. -do research into a specific company on the NYSE and analyze the work of entrepreneurs and leaders in the company in relation to the company's success.	Lessons VIII/IX 1. Using the stock tables from any newspaper discuss the columns on a stock market talbe and what each represents. 2. Discuss the breakdown of the dollar in relation to points. Give examples and allow students to work in groups practicing how to read the stock tables. 3. Using the financial pages of the newspaper read articles together and discuss the events taking place in relation to the movement of certain stocks in the stock market. Discuss how world events affect the stock market. 4. Students are then asked to work in groups or indiviudally to choose a stock, do research into the company, chart on a bi-weekly basis for one month the movement of their stock and analyze this movement. At the end of one month students will give oral reports and display charts on the progress of their company.	Financial pages of a newspaper Evaluation Tool: Successful completion of: group work and discussion on stock tables, research reports and stock graphs.
DECEMBER The student will: -describe the use and the components of the Dow Jones Averages -do research into and analyze the work of Charles Dow and Edward Jones and their contribution to the economic world. -analyze and evaluate the movement of the Dow Jones Industrial Average on a daily basis for one week.	Lesson X 1. Discuss with the students how and why the averages began. Explain the components of other market indicators - specifically Standard and Poor's, Inc., and New York Stock Exchange Indicator. 2. Discuss how the Dow stocks are selected and how the "average" is found. 3. In groups students will do research into the life and works of Charles Dow and Edward Jones Students will use entrepreneurial skills to develop new ways of measuring the movement of the market.	Research brochures from the Dow Jones & Comp., Inc. Evaluation Tool: Successful completion of class discussion, research reports.
JANUARY/FEBRUARY The student will: -recognize that competition encourages people and businesses to do their best.	Lessons XI/XII 1. View films and discuss. Initiate discussion on times when students found themselves in a competitive activity. Analyze how this helped them do their best.	Films #2 and #3.

OBJECTIVES	PROCEDURES	MATERIAL
-analyze the effect of competition as a benefit to consumers by keeping prices low, quality high, and offering consumers more alternatives.	2. Introduce the idea that competition helps people develop new products and helps keep prices down. 3. Use the following "Ballpoint Pen Activity": Discuss what types of pens were used before ballpoint pens. Tell the students that in 1945 Milton Reynolds began producing ballpoint pens. Each pen sold for $12.50. His profits in the beginning were as much as $500,000 per month. By the end of 1945 there were about 100 manufactures of ballpoint pens (high prices attract other producers) the price of a pen went as low as 39¢.	Evaluation Tool: Successful completion of: class discussion after activity, group activity, research reports.
-analyze and compare how competition among new products resulted in lower prices for the consumer	3. Discuss why Reynolds made such a huge profit, why other firms began producing ballpoint pens in 1945. Why the price of the ballpoint pen fell dramatically; how did consumers benefit from this competition. 4. In groups have students try to think of other new products that later experienced competition resulting in lower prices and greater variety for the consumer. (computers, color TV, calculators, VCR's) 5. Students will do research into products to find out the original manufacturers, the approximate original price, the names of competitors, and the approximate price today. Students will make charts to illustrate their findings.	
The student will: -analyze how specific businesses compete in a variety of ways. -compare and contrast the advertising techniques of specific businesses. -do research into one type of business or product and analyze how specific companies differentiate their products to gain a larger share of the market.	Lessons XIII/XIV 1. Discuss a variety of persuasive devices used in advertising (exaggeration, repetition, group appeal, testimonial, card stacking, slanted words). 2. Discuss and illustrate the use of emotional advertising, logical advertising and product endorsement. 3. View films and discuss important aspects of advertising. To reinforce concepts students will role play advertisements and create their own commercials using the persuasive devices that have been discussed. 4. In groups students will choose a specific business or product; analyze the use of advertising and the specific devices that the companies use to differentiate their product. Students will chart/graph their findings, analyze their findings in a written report and summarize their findings in an oral report to the class.	Films #4,5,6 Evaluation Tool: Successful completion of - role playing, group activity, class discussion.

OBJECTIVES	PROCEDURES	MATERIAL
The student will: -analyze the aspects of being a responsible consumer. -identify situations of consumer fraud. -identify the services of the Consumer Affairs Office. -create situations of consumer fraud and possible solutions.	Lessons XV/XVI 1. Discuss with the students and outline the aspects of responsible consumership. Discuss life situations in which planning and budgeting is essential. Outline the steps to good budgeting and how it is essential to be a responsible consumer. 2. Discuss situations of consumer fraud; role play fraud situations and possible solutions. 3. Discuss with parents situations where they have been caught in consumer fraud. Write a short essay on the findings and their solutions, and the alternatives to the solution. 4. View films and discuss important concepts. 5. Invite, as a guest speaker, the Director of Consumer Affairs, to relate the services of the Consumer Affairs Office.	Films #7,8,9,10 Speaker and booklets from the Consumer Affairs Office Evaluation Tool: Successful completion of outline, role play, essay.
FEBRUARY/MARCH/APRIL The student will: -play the Stock Market Game, in competition with other teams throughout the state and nation. -take an initial $100,000, invest it in the market, and try to make as much money as possible during a ten week period.	Lessons XVII/XXVIII Explain to the students how the Stock Market Game works and the rules to follow in playing the Stock Market Game. 1. Divide the class into teams and play the Stock Market Game for the next ten weeks. 2. During the next 10 weeks the following steps and concepts should be followed and reviewed: a) Read newspaper listings of stock prices. b) Compute brokerage fees and interest charges. c) Explain the various forms of business organization. d) Recognize the laws of supply and demand e) Examine the interaction of current political and economic events with changing stock prices.	Players manual and materials for the Stock Market Game Other Resources: The Asbury Park Press, Newspaper in Education Department. Evaluation Tool: Completion of "The Stock Market Game".
APRIL/MAY/JUNE The student will: -be able to explain how income taxes provide revenue for goods and services that benefit the general public including students. -research and examine the historical background of the current withholding system. -develop a list of local goods and services that are available because of tax revenues.	Lessons XXIX/XXX 1. Discuss the definition of taxes (required payments of money to governments used to provide goods and services). 2. Discuss personal responsibility implied by U.S. citizenship: paying federal income taxes. 3. Discuss voluntary compliance and non-compliance. View video and look for examples of both. Use questions to discuss video content. 4. In groups students should develop a list of public goods and services. Analyze list for	Videos #1, 2 Transparencies #1, 2 Evaluation Tool: Successful completion of class discussion, group research project.

OBJECTIVES	PROCEDURES	MATERIAL
	those services which students use frequently and those which they use only occasionally or never. How many of the items did not exist before 1900? Compare and contrast the quality of services -vs- the amount of taxes paid. 5. Use transparencies to review the main sources of federal, state and local taxes. 6. In groups students will do research on the evolution of our federal tax system. Findings will be presented to the class in the form of charts, timelines written and oral reports. As a supplement to student information, show video #2.	
The student will: -identify the basic forms used in our federal tax system. -analyze the information contained on a W-4, W-2, 1099, and 1040A form. -successfully complete a 1040A tax form based on scenarios.	Lessons XXXI/XXXII 1. Introduce and discuss with students the following key terms: dependent, earned income, interest income, tax withholding withholding allowance. 2. Distribute W-4 forms or use transparencies to demonstrate the information found on a W-4 form. Use the same process for the W-2 and 1099 forms. Discuss with students how information contained on these forms are used in the filing of federal income tax. 3. Using the 1040-A forms, transparencies and selected scenarios, walk students through the filling out of the tax form. Use questions to assure the understanding of the material. 4. Distribute more 1040-A forms and scenarios to groups of students and allow time to complete the activity.	Transparencies #3,4 Tax forms and booklets from U.S. Post Office. Teacher developed scenarios Evaluation Tool: Successful completin of class discussion, 1040-A forms.
The student will: -list and later analyze the kinds of taxes collected by state and local governments. -evaluate the goods and services provided by state and local taxes. -research and analyze how the lottery system works in N.J.	Lessons XXXIII/XXXIV 1. Have students create a list of when and where they pay taxes. Encourage them to suggest examples of taxes based on income, on consumption, and on wealth. 2. Use the transparency to discuss the three primary tax bases for state and local taxes: Consumption (sales) tax, Wealth (property) tax, and Income Tax. 3. Be sure that students are aware that the state tax programs discussed above account for the majority of revenues collected by the state. 4. Explain some of the other important ways that states collect revenue. In groups, students will do research on the state lottery and how the revenues are used in the state. Groups will present both oral and written projects.	Transparency #5 Evaluation Tool: Successful completion of class discussion, research report.

GIFTED ECONOMICS

GRADE FIVE

TEACHER/STUDENT RESOURCES

A. FILMS

(The following films are found in the Monmouth County Audio-Visual Aids Commission)

1. Build Your Economic Power - 212993
2. Buy, Buy, Buy - 105082
3. Why Do You Buy? - 105082
4. Analyzing Advertising - 207663
5. Play the Shopping Game - 213075
6. T.V. Ads - 214171
7. Choosing What to Buy - 213072
8. Consumer Complaints - 211960
9. Wise and Responsible Consumership - 207665
10. Consumer Fraud - 105617

B. TRANSPARENCIES

(The following transparencies are found in Understanding Taxes from the Council on Economic Education)

1. "Federal Taxes and Spending"
2. "State and Local Taxes and Spending"
3. "Form W-4"
4. "1040A" (2)
5. "Three Primary Tax Bases"

C. VIDEO

(The following videos can be found in Understanding Taxes from the Council on Economic Education)

1. "Income Tax and You"
2. "Evolution of our Federal Tax System"

D. OTHER RESOURCES

1. The Stock Market Game, N.J. Council on Economic Education
2. The New York Stock Exchange, 11 Wall Street, N.Y., N.Y., 10005
3. The American Stock Exchange, 86 Trinity Place, N.Y., N.Y.10006
4. The Asbury Park Press, Neptune, N.J.
5. Monmouth County Office of Consumer Affairs, Freehold, N.J.
6. Dow Jones & Company, Inc., P.O. Box 300, Princeton, N.J.
7. Joint Council on Economic Education, 432 Park Ave. So. New York, New York, 10016
8. Understanding Taxes, Internal Revenue Services, P.O. Box 1400 K, Dayton, Ohio, 45414

INQUIRY PROCESS AND INDEPENDENT LEARNING SKILLS
RATIONALE

Not all gifted students are self-directed independent learners. They need to practice the skills needed to conduct their own research, direct their own study, and hopefully become life-long learners. They need practical skills to be able to manage their time, sequence activities and identify resources.

COURSE DESCRIPTION

This course of study was planned to assist students in learning to identify their goals and objectives, assess the skills they need to acquire, determine how they will go about their learning and to evaluate their own performance. It provides the teachers in the program with a systematic approach to teaching these necessary skills. The skeletal year-long plans were designed to cover the following areas:

1. Recognizing a variety of investigatory techniques
2. Knowing the reference sources available
3. Knowing why and how the sources are organized
4. Understanding why data is organized
5. Knowing how to select data for organizing
6. Understanding why and how to pull data apart
7. Knowing how to interpret individual findings
8. Understanding how to assess data from a variety of viewpoints
9. Understanding how to assess a variety of interpretations of the same data
10. Writing a report
11. Presenting an oral report
12. Creating original products
13. Evaluating performance

(Adapted from B.S. Atwood, Building Independent Learning Skills)

There are six phases to the inquiry process approach. This process can be continuously developed during the student's life-time. The phases are:

1. Identification of problems to study
2. Collection and organization of known information concerning problems
3. Statement of hypothesis (or question) and possible conclusions
4. Investigation and research to test hypothesis
5. Communication of findings and final product to others
6. Evaluation of total procedure

(Adapted from Stovall and Tongue, Itinerant Resource Teachers for Gifted/Talented)

COMMENTS TO THE TEACHER

The library skills activities are intended to be used in consultation with the media specialist. The classroom teacher will determine when skills are introduced and developed.

TEACHING THE INQUIRY PROCESS - INDEPENDENT LEARNING SKILLS

	LIBRARY SKILLS & RESEARCH SOURCES	WRITTEN REPORT FORMAT	ORAL REPORT FORMAT	ORGANIZING & CLASSIFYING PROCESS	STUDENT PRODUCTS	EVALUATION
K	Non-fiction books Picture Books Magazines Advertisements	Cover Picture Sentence Bibliography (Title & Author)	*Three Things I Learned *Visual Aid	-Alphabetizing -Classifying Books -Title Page -Table of Contents -Labeling -Planning a Report	ROLE PLAYING SIMULATION MURAL PLAY PUPPET SHOW LEARNING CENTER TASK CARDS POETRY MODEL GRAPH-CHART SONG SHORT STORY GAME SIGN PAMPHLET REVIEW NEWSPAPER BOOK PHOTO ESSAY COMMUNITY PROJECT WORKSHOP TRANSPARENCIES SLIDE SHOW FILM-VIDEO FILMSTRIP ARTICLE AUDIO-TAPE DEBATE	Teacher and Student
1	Dictionary Non-fiction books Magazines Encyclopedia pictures Maps, Graphs, Tables, Charts	Outline Body Bibliography	*Team Report and individual *Visual Aid	-Organization of Library -Interviewing -Topic Selection -Outlining with Questions		Teacher and Student
2	Encyclopedia Biography Telephone Book Card Catalog Index	Outline Body Bibliography	Team Report and Audio-Visual Aid	-Summarizing -Proofreading -Notetaking -Outlining With Questions		Teacher and Student
3	Dewey Decimal System Atlas Newspaper TV Radio	Entire Bibliography Footnotes	*From Outline Using Notecards *Report Two Items From Each Topic	-Fact and Opinion -Making Inferences -Analogies/Comparisons -Developing a Hypothesis -Drawing Conclusions -Recognize Bias -Conduct Surveys -Cause and Effect		Teacher and Student
4	Almanac Encyclopedia Index Audio-Visual Aids	Entire Bibliography Footnotes	*Summary of Each Main Topic *Use Notecards	-Outlining with Topics -Skimming and Scanning -Relevant and Irrelevant		Teacher and Student
5	Reader's Guide to Periodical Literature N.Y. Times Index Microfilm	Entire Bibliography Footnotes	Same as above or Summary of Entire Outline	Review and refine at a more advanced level		Teacher Student Peer

INQUIRY PROCESS SKILLS - KINDERGARTEN

I. LEARNER OBJECTIVES:

A. Students will recognize picture books, magazines, and advertisements as possible resources to find information.

B. Students will be able to alphabetize words by first letter.

C. Students will be able to locate fiction and non-fiction books in a library.

D. Students will be able to lable a category of given items.

E. Students will be able to locate a book about a given topic.

F. Students will be able to identify and use the Title Page and Table of Contents in a book.

G. Students will be able to choose a title for a report and the main topics to be studied.

H. Students will produce a written research report consisting of a cover, title, picture, sentence, and bibliography (title of book and author).

I. Students will orally report information on their topic and include a visual aid.

II. INTRODUCTORY ACTIVITIES:

A. Teacher will display magazines, picture books, and advertisements on a given topic. Students will discuss information which could be obtained from these sources.

B. Teacher will explain method of alphabetizing words by the first letter.

C. Librarian will introduce the non-fiction and fiction areas of the library and the procedure for locating a book on a given topic.

D. Teacher will display a group of related pictures. Students will suggest labels for pictures.

E. Teacher will present a lesson on Title Page and Table of Contents, by having students locate the Title Page and Table of Contents of several books. Teacher will demonstrate how a Table of Contents is used.

III. DEVELOPMENTAL ACTIVITIES:

Students will have the opportunity to practice and demonstrate skills from the introductory activities via:

A. Interest Centers

B. Teacher made and commercially prepared worksheets

C. Discussions

D. Other curriculum areas (See Appendix K-1)

IV. CONCLUDING ACTIVITIES:

To demonstrate the ability to use the skills learned, the student will produce a written report. The following procedure will be used during whole group instruction.

A. Teacher will give the student a broad topic i.e. animals.

B. Students will choose an animal that they don't already know all the physical characteristics of.

C. Teacher will formulate a question for students i.e. "What are the physical characteristics of my animal?"

D. Students will go to the library to choose a magazine or book to find information to answer question.

E. Students will produce a cover page including the following things: title of research report, their name and date on bottom, and a picture (can be drawn or cut out from magazine, newspaper, etc.).

F. Students will draw a picture of what their animal looks like.

G. Students will write a sentence (with teacher assistance if needed) about their animal.

H. Students will write a bibliography that will consist of the name and author of the book used for research report.

I. Students will present an oral report that will include at least three things they learned and a creative visual product i.e, collage, diorama, poster, etc.

V. EVALUATION:

A. Teacher will evaluate the student product (report and visual aid) via a checklist of skills taught throughout group phase and independent phase of project (see Appendix K-2).

B. Students will do a self-evaluation using checklist provided (see Appendix K-3).

TEACHER RESOURCES

McAllister, Elizabeth, Primary Reading Skills Activities Kit, The Center for Applied Research in Education, West Nyak, New York, 10995, 1987

Continental Press
Elizabethtown, Pennsylvania, 17022

Frank Schaffer Publication, Inc.
1028 Via Marabel Dept. 250
Palos Verdes Estates, California, 90274

TEACHER EVALUATION CHECKLIST

NAME: _____

DATE: _____

DIRECTIONS: For each skill listed, score from 1-4 using the following criteria:

4 - Has mastered skill
3 - Is beginning to master skill, some work still needed
2 - Has basic understanding of the skill, much work needed
1 - Had much difficulty getting started

SKILLS:

1. Recognizes picture books, magazines, and advertisements as resources to find information _____
2. Alphabetizes words by first letter _____
3. Locates fiction and non-fiction books in a library _____
4. Labels a category of given items _____
5. Identifies and uses Title Page and Table of Contents in a book _____
6. Chooses a title for a report and main topics to be studied _____
7. Creates a cover page with a title for written research report _____
8. Creates a picture with sentence for report _____
9. Writes a bibliography in the proper form (title and author) _____
10. Successful oral presentation of information _____
11. Displays creativity in his/her visual product _____

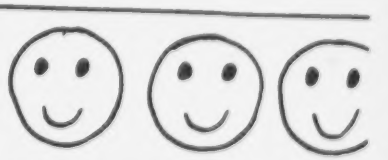
Appendix K-3

I Am Proud Of My Work

Name: _____

Date: _____

Directions: How happy am I with my work? Color the number of happy faces.

I used my time well.	
I learned something new.	
I did my best art work.	
My report was done neatly.	
I spoke so others could understand me.	
I worked hard on my creative project.	

INQUIRY PROCESS SKILLS - GRADE ONE

I. GIFTED LEARNER OBJECTIVES:

A. Students will review all concepts from previous grade level.

B. Students will recoginze magazines, non-fiction books and encyclopedia pictures as resources.

C. Students will recognize maps, graphs, tables and charts as sources of information.

D. Students will recognize areas of the library and where to locate information.

E. Students will interview people as resources.

F. Students will understand the purpose and format of an outline.

G. Students will identify the topic and main ideas of a report.

H. Students will categorize details into major areas of an outline.

I. Students will write details into sentence form.

J. Students will write a bibliography including the author and title of the resource.

K. Students will report orally information acquired from research.

II. INTRODUCTORY ACTIVITIES:

A. Students will review research skills from kindergarten.

B. Teacher will display magazines, non-fiction books and encyclopedia pictures on a given topic. Students will discuss information which could be obtained from these pictures. Teacher will record facts.

C. Teacher will display a map, graph, table and chart and discuss with students the information each resource provides us.

D. Librarian will introduce the areas of the library and show the types of books located in each area.

E. Teacher will explain the use and techniques of interviewing. Teacher will display samples of interviews via newspapers and magazines.

F. Teacher will display a skeletal outline and demonstrate
G. how it is used to organize information. Teacher will
H. fill in the outline step by step as a given topic is discussed (topic, main ideas, details). SEE APPENDIX 1-3.

I. Teacher will deomstrate how to write a detail from the outline into sentence form. Teacher will explain that all details under a main topic are written into a paragraph. Teacher will demonstrate indenting for each paragraph.

J. Teacher will explain the format and use of a bibliography. Students will locate the title and author of several books.

K. Teacher will discuss the rules for giving an oral presentation. Rules will be written on a chart.

INQUIRY PROCESS SKILLS - GRADE ONE

I. GIFTED LEARNER OBJECTIVES:

A. Students will review all concepts from previous grade level.

B. Students will recoginze magazines, non-fiction books and encyclopedia pictures as resources.

C. Students will recognize maps, graphs, tables and charts as sources of information.

D. Students will recognize areas of the library and where to locate information.

E. Students will interview people as resources.

F. Students will understand the purpose and format of an outline.

G. Students will identify the topic and main ideas of a report.

H. Students will categorize details into major areas of an outline.

I. Students will write details into sentence form.

J. Students will write a bibliography including the author and title of the resource.

K. Students will report orally information acquired from research.

II. INTRODUCTORY ACTIVITIES:

A. Students will review research skills from kindergarten.

B. Teacher will display magazines, non-fiction books and encyclopedia pictures on a given topic. Students will discuss information which could be obtained from these pictures. Teacher will record facts.

C. Teacher will display a map, graph, table and chart and discuss with students the information each resource provides us.

D. Librarian will introduce the areas of the library and show the types of books located in each area.

E. Teacher will explain the use and techniques of interviewing. Teacher will display samples of interviews via newspapers and magazines.

F. Teacher will display a skeletal outline and demonstrate
G. how it is used to organize information. Teacher will
H. fill in the outline step by step as a given topic is discussed (topic, main ideas, details). SEE APPENDIX 1-3.

I. Teacher will deomstrate how to write a detail from the outline into sentence form. Teacher will explain that all details under a main topic are written into a paragraph. Teacher will demonstrate indenting for each paragraph.

J. Teacher will explain the format and use of a bibliography. Students will locate the title and author of several books.

K. Teacher will discuss the rules for giving an oral presentation. Rules will be written on a chart.

SUBJECT: LANGUAGE - GRADE ONE
INQUIRY PROCESS cont'd.

III. DEVELOPMENTAL ACTIVITIES:

A. Students will review research skills taught in Kindergarten by producing a report containing a cover, picture and sentence, and bibliography. The teacher will give each student a book to use as a resource.

B. Teacher will assign topics to students. Students must locate a magazine, a book, and the encyclopedia volume containing this topic. Librarian will assist with this lesson.

C. Teacher will provide maps, graphs, tables and charts that could be used to locate information. Teacher will question students and they must respond with the appropriate source to use.

D. Librarian will call out a book or area in the library. Students must go to the area and point to the item or area.

E. Teacher and students will brainstorm questions for use in interviewing people about a given topic. Teacher will make a workable ditto to use in interviewing. Students will use the interview sheets at another time.

F. Students, working in groups with the teacher, will
G. fill in an outline pertaining to their group report.
H. Students will gather facts from books, pictures and magazines. Teacher will make a group outline on a chart, as students fill in a personal outline.

I. Students will write each fact from their outline into a sentence. They will indent when main ideas change.

J. Students will write the author and title of each book used in their group research. Students will organize the authors' names in alphabetical order to compile a bibliography.

K. Students will prepare a group oral presentation by assigning each student with a main idea to report. The students will present the information with a visual aid. Students will practice the presentation within their group.

IV. CONCLUDING ACTIVITIES:

Students will produce a group report containing the following requirements:

A. Cover
B. Outline
C. Body-first draft
   -final draft
D. Illustrations
E. Bibliography - Author, Title
F. Visual Aid Product
G. Oral Report
   1. Statement of one main idea and details
   2. Visual Aid

SUBJECT: LANGUAGE - GRADE ONE
INQUIRY PROCESS cont'd.

V. EVALUATION:

A. Teacher will evaluate the student product (report and visual aid) via a checklist of skills taught throughout group phase and independent phase of project. (See APPENDIX 1-1).

B. Student will do a self-evaluation using worksheet provided. (See APPENDIX 1-2)

APPENDIX 1-1

TEACHER EVALUATION CHECKLIST

O=outstanding S=satisfactory N=needs improvement

	O	S	N
1. Student was able to produce a kindergarten level report as a review.			
2. Student was able to choose the appropriate resource to find information.			
3. Student contributed resource materials to group.			
4. Student was able to locate a resource in the proper area of the library.			
5. Student contributed questions to the class interview sheet.			
6. Student was able to classify information into the proper categories of an outline (main idea and details).			
7. Student was able to write facts from an outline into sentences.			
8. Student indented paragraphs.			
9. Student was able to write a bibliography in the proper format.			
10. Student successfully presented his/her contribution to the group presentation.			
11. Student displayed creativity in his/her visual product.			

Three Star Rating

Directions: A good job deserves stars. Color 1 to 3 stars to show how well you did the job.

1. I used my time well.	
2. I gave ideas to my group.	
3. I brought in books and pictures.	
4. I wrote neatly.	
5. I did my best art work.	
6. I spoke so others could understand me.	
7. I worked hard on my creative project.	

ANIMALS

I. NATURAL HABITAT

A. Where does the animal live?

B. What is the weather or climate like?

C. How does it make its home?

D. What does it use to make its home?

II. FOOD

A. What does it eat?

B. Where does it get its food?

C. How does it get it?

III. CHARACTERISTICS (What does it look like?)

A. What body parts are unusual?

B. What animal group does it belong to?

C. How does it take care of its babies?

D. Are their babies born or hatched?

E. What kind of body covering does it have?

IV. PROTECTION

A. How does it protect itself?

INQUIRY PROCESS SKILLS - GRADE TWO

I. LEARNER OBJECTIVES:

A. The students will review all concepts from previous grade levels.

B. The students will gain knowledge of and demonstrate an ability to use the encyclopedia.

C. The students will recognize that biographies and autobiographies are sources of information.

D. The students will develop an understanding of and the ability to use the card catalog.

E. The students will become skilled at using the telephone book as a reference source.

F. The students will demonstrate the ability to summarize a report by identifying the main ideas.

G. The students will develop skill in taking notes.

H. The students will practice proofreading a final product.

II. INTRODUCTORY ACTIVITIES:

A. The teacher will review those concepts previously taught in Kindergarten and Grade One by referring to the respective curriculum guides that detail this information.

B. The teacher will explain the general purpose of the encyclopedia and its value as a reference tool. The teacher/librarian should also acquaint students with the various types of organization employed in the different sets, the nature of the information provided, ant the importance of the copyright date.

C. The teacher will compare and contrast biographies and autobiographies in order to broaden the scope of potential reference sources.

D. The teacher/librarian will demonstrate the use of the card catalog according to title, author, and subject matter.

E. The teacher will review the organization of the telephone book and how to utilize each section for the purpose of recognizing its value as a source of information and a provider of references.

F. The teacher will demonstrate how to summarize a report by identifying the main ideas presented and organizing them in outline format.

G. The teacher will show students how to take notes by selecting a subject and listing the relevant fact/words that describe it.

H. The teacher will illustrate how to proofread a final product by rereading to check the accuracy of the content and the mechanics.

III. DEVELOPMENTAL ACTIVITIES:

A. Have students describe what they have learned regarding sources of information they would use to find out more about something of interest. On a chart, record student suggested references. Add any sources omitted by referring to the Kindergarten and Grade One Curriculum Guides. NOTE: A "hands-on" display of appropriate reference sources/tools is recommended to stimulate interest and motivate students to achieve this objective.

B. Arrange for guided tours of both the school and public library in order to familiarize students with the different kinds of encyclopedia available at each facility. Encourage students to examine these references in order to compare and contrast the type of organization employed. The librarian should then describe the nature of the information contained in each set, the significance of the copyright date, and recommend those most appropriate for our use.

C. On the guided tours described above, provide an opportunity for students to locate the section in each library reserved for biographies and autobiographies. Briefly describe their value and limitations when conducting research.

D. Divide the class into groups of 4-6 and schedule a time with the librarian in order for each group to receive instruction on the use of the card catalog according to title, author, and subject. A "hands-on" approach for each student is suggested.

E. Provide sufficient telephone directories so that two or three students are looking at one book. Have students examine their copy and describe the different sections and kinds of information included. Ask students how they would go about locating their number? A friend's? A carpenter? A restaurant? Have class discuss how and why the telephone book is useful when conducting reserach.

F. Provide each student with a worksheet containing several paragraphs describing a process or an activity. Have students identify the main idea contained in each paragraph. Demonstrate on the board how Roman numerals are used to accompany each main idea in sequence and provides us with not only the framework of an outline, but also a summary of the process or activity described on the worksheet. This activity should be reinforced using other topics and increasing the number of paragraphs.

G. Begin by choosing a simple subject such as the flag and have students name an observable fact - blue, red, white, stripes, stars, etc. Refer back to the worksheets and skeletal outlines used in the previous activity. Ask students to state the facts contained in each praragraph. Demonstrate how these are incorporated into the outline by the use of upper-case letters and explain that this procedure is regarded as taking notes.

H. Present the class with a story prepared on a transparency or chart paper that contains errors in spelling, punctuation, capitalization, etc. Encourage students to identify as many errors as possible.

INQUIRY PROCESS SKILLS - GRADE TWO cont'd.

IV. CONCLUDING ACTIVITES:

Students will conduct research on a subject and write a report using the following:

A. Written Report

1. Cover
2. Outline
3. Body
   a. First Draft
   b. Final Draft
4. Bibliography
   a. Title
   b. Author
   c. Copyright Date

B. Audio-Visual Product

C. Oral Presentation

D. Evaluation

1. Teacher Evaluation

   The teacher will use a point system to evaluate the student's final product (see Appendix A)

2. Student Evaluation

   The student will evaluate his/her final product by using a rating scale (see Appendix B)

3. Peer Evaluation

   Students will evaluate each other's work by completing a questionnaire (see Appendix C)

APPENDIX 2 - A

TEACHER EVALUATION SHEET

DIRECTIONS: Use the following key to assign a numerical value for each assessment factor:

No Effort	Little Effort	Satisfactory Effort	Good Effort	Outstanding Effort
1	2	3	4	5

_____1. Depth of study made by student

_____2. Quality of product submitted

_____3. Student used different sources of information

_____4. Project completed on time

_____5. Effective presentation

STUDENT SELF-EVALUATION SHEET

NAME_____ DATE_____

TITLE OF PROJECT_____

DIRECTIONS: Answer the following questions by placing a check in the column that best describes how you feel about your project:

	POOR	FAIR	GOOD
1. The research I did on my project was			
2. I used different types of resources			
3. My project shows creativity			
4. The written part of my project was well organized			
5. My oral presentation was			
6. My project shows effort			

7. What I liked best about my project...

8. If I were to do this project again, I would...

CRITERIA CHECKLIST OF RESEARCH SKILLS
GRADE TWO

	SATISFACTORY	UNSATISFACTORY
1. The student can identify three sources of information used in previous grades		
2. Given a set of encyclopedia, the student can select the appropriate volume to research a specific topic		
3. The student can distinguish a biography from an autobiography		
4. Given the card catalog, the student can list the title and author of two books pertaining to a given subject		
5. The student can use a telephone directory to find the phone number of a given person		
6. Given a three paragraph report, the student can summarize by identifying the main ideas		
7. Given a descriptive paragraph, the student can identify the details		
8. The student can proofread by rewriting a paragraph containing errors		

INQUIRY PROCESS SKILLS - GRADE THREE

I. LEARNER OBJECTIVES:

A. Students will review all skills from previous grade levels.

B. Students will identify the purpose of the Dewey Decimal System and demonstrate and ability to use it.

C. Students will identify the information found in an atlas and demonstrate an ability to use it.

D. Students will identify the newspaper, radio/television news programs, and educaitonal television programs as information sources.

E. Students will identify the survey as an information source and demonstrate the ability to conduct a survey and report survey findings.

F. Students will understand how to pull data apart (distinguish between fact and opinion and recognize cause and effect relationships and know how to interpret individual findings (make comparisons and analogies, draw conclusions, make inferences).

G. Students will understand how to write a bibliography and footnotes.

H. Students will demonstrate how to give an oral report from their outline using notecards, and using at least two items from each topic.

I. Students will demonstrate the ability to form an hypothesis (questions), find information from a variety of sources and present a written report and oral presentation (with products) on their topic of inquiry.

II. INTRODUCTORY ACTIVITIES:

A. The teacher, using guides from grades K-2, will review the skills which have been presented thus far.

B. The teacher or librarian will explain the Dewey Decimal System of classifying books.

C. The teacher or librarian will present atlases to the students to show where they are located in the library and what kind of information is found inside the atlas.

D. The teacher will stimulate a discussion of current topics found in newspapers, television and radio and will relate it as a source of information which could be used in a report.

E. Teacher will conduct a survey at the chalkboard with a topic suggested by the students and will draw a conclusion.

F. Teacher will give examples and ask for student examples of the analysis and evaluation learner objectives. A chart of each example should be posted in the classroom.

G. The teacher will distribte to each student, a copy of the report form, APPENDIX 3-1, and explain the format for the bibliography and the importance of citing a direct reference with quotation marks and the source in parentheses.

H. The teacher will explain how the oral report should be presented from the outline and notecards. Teacher will read a piece of writing and then do the same by using notecards to show students that it is more interesting to listen to a speaker who doesn't read a report. Teacher will also refer to the students language text, "How to Give a Book Talk".

I. The teacher will review the entire process - see IV Concluding Activities A-F.

III. DEVELOPMENTAL ACTIVITIES:

A. The students will practice, from previous grade level suggested activities, the skills needed to form an outline, to use a card catalogue and to take notes. See Science page 205 for note taking.

B. Using the Economy Reading Series Workbook page on the Dewey Decimal System, students will practice placing a book title in the correct division.

C. Students will work in groups of 3-4 to study a map and write down all of the information they can get from the map. Teacher will record the ideas on chalkboard. Students will then examine an atlas and practice various activities from the Social Studies text and with the librarian during library time.

D. Students will view a news program, documentary or educational program, take notes, and report to the class.

E. Students will take a survey of people's (children and adults) favorite informative TV show, newspaper, radio show. Students will tabulate the results and draw a conclusion. Offer other opportunities for students to do surveys during the year.

F. These learner objectives are covered extensively in the critical reading skills found in the students' Economy Reading Series. The teacher should relate these skills to reading and writing for an independent research project.

G. Footnotes and correct bibliography form will be practiced when students write their research report.

H. Students will practice this oral speaking technique by doing an oral book report and sharing current events.

I. To prepare students for their independent study and following procedure is suggested: Students will keep an "Independent Study Folder" with separate pages for each step:
   - Page 1 - Identify a problem to study. Write it down
   - Page 2 - Write down the known facts about the problem
   - Page 3 - Write as many questions as possible about the topic
   - Page 4 - Select one to work on

Page 5 - Devise an outline in question form
Page 6 - Notecards - 5 X 7 -
Use a different color crayon to mark a line across several notecards for each outline topic. Use the right color notecard for each topic!
Page 7 - Bibliography card - List sources and assign a letter. Keep track of the source letter on each notecard.
Page 8 - Write an introduction to the report (the question I will try to answer in this report or my purpose, etc.)
Page 9 - Organize all notecards and begin writing report
Page 10- Write a conclusion (end with a conclusion or solution supported with facts)
Page 11- What products will I include in my oral presentation?
Page 12- Checklist - student checks to see if all items are included. See APPENDIX 3-2

IV. CONCLUDING ACTIVITIES:

Students will complete an independent research project which will include the following:

A. A variety of sources and media

1. Books
2. Encyclopedias
3. Magazines
4. Atlas
5. Newspaper, radio, television
6. Survey
7. Interview

B. Analysis and Evaluation Skills

1. Pull apart data by distinguishing between fact and opinion and recognizing cause and effect relationships in the written and oral report.
2. Interpret individual findings by making comparisons and analogies, drawing conclusions, and making inferences.

C. Write a written report with:

1. Title Page, Outline
2. Introduction (Statement of Purpose)
3. Body
4. Conclusion (findings supported with facts)
5. Bibliography

D. Oral report with products

E. Self-Evaluation (APPENDIX 3-3)

F. Teacher Evaluation (APPENDIX 3-4)

V. RESOURCES:

A. Asking Questions, Finding Answers
by Dianne Draze (Dandy Lion Publications, 1979)

B. Enconomy Reading Series, A Hundred Circling Camps

C. How Reference Resources Help Us, by James Quinlan (Benefic Press, 1969)

D. Language for Daily Use, Harcourt, Brace, Jovanovich, 1983

NOTES ON WRITING A RESEARCH PAPER

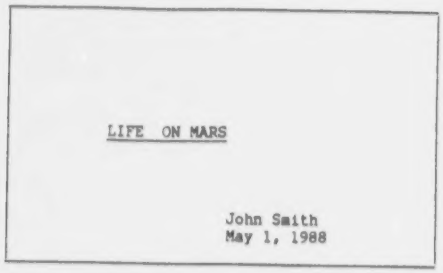
BASIC COMPONENTS

I. COVER PAGE:

Title of Report

Name

Date



II. OUTLINE

III. BODY OF REPORT

IV. FOOTNOTES

If direct quotes are used reference is made in the body of the report with parentheses.

"da da da da da" etc. (Snakes are Interesting, p. 17)

V. BIBLIOGRAPHY

(See format below). Categories should be used as presented and references listed in alphabetical order by author/editor.

BIBLIOGRAPHY FORMAT

BOOKS

Author. Title
Place of Publication: Publisher. Date.

Jones, Mary. Life on Mars
New York: McGraw-Hill. 1959.

ENCYCLOPEDIAS/ATLAS/ALMANACS

Editor Name, ed. Name of Encyclopedia or Reference.
Place of Publication: Publisher. Date. Volume.

Smith, Jim, ed. World Book Encyclopedia.
New York: McGraw-Hill. 1986. Volume 4.

PERIODICALS/NEWSPAPERS

Author of Article. "Title of Article". Title of Periodical.
Volume: page. Date of Periodical.

Brown, Mary. "Snakes and Birds." Ranger Rick.
36: 17-19. April, 1988.

NAME:

TOPIC:

DATE DUE:

CHECKLIST FOR MY WRITTEN REPORT

_____My cover has all the necessary information.

_____My outline has the questions I will answer in the report

_____My introduction states my hypothesis or question I am trying to answer. This is my purpose for writing this report.

_____The body of my report flows from my outline.

_____My conclusions state my discoveries and are supported by facts.

_____All quotes in my report have references in parentheses.

_____My bibliography follows the format.

_____I have checked my spelling, punctuation, and grammar.

_____My handwriting is neat.

_____I have made notecards for my oral presentation.

_____I have a product to show with my oral presentation.

APPENDIX 3-3

STUDENT SELF-EVALUATION FORM

NAME_____DATE_____

TITLE_____

	LOW				HIGH
	1	2	3	4	5
1. I used my time well					
2. I used a variety of resources					
3. My project is well organized					
4. I outlined questions to answer					
5. I organized my notecards					
6. I wrote a bibliography card					
7. I had an interesting cover					
8. I had a good introduction					
9. I learned a lot of new information					
10. I had my own ideas in my conclusion					
11. My project presentation was					
12. I used correct splling/punctuation					
13. My report was neatly done					

What I liked best about doing my project was_____

_____

_____

On my next project, I could improve_____

_____

_____

TEACHER EVALUATION FORM

NAME_____ DATE_____

PROJECT TITLE_____

	O	S	N
1. Used a variety of resources			
2. Project was well organized			
3. Outline had questions			
4. Organized notecards			
5. Bibliography card			
6. Interesting cover			
7. Good introduction			
8. Good conclusion			
9. Oral presentation			
10. Products			
11. Spelling/punctuation			
12. Neatness			

Suggested areas of improvement to assist in independent study:

INQUIRY PROCESS SKILLS - GRADE FOUR

I. LEARNER OBJECTIVES:

A. The student will review all concepts from previous grade levels.

B. The student will identify the purpose and function of an almanac and demonstrate on ability to use it accurately.

C. The student will recognize and employ the encyclopedia index as a tool for research.

D. The students will explore, distinguish and analyze the uses of audio visual sources in the inquiry process.

E. The students will identify and appraise materials as relevant or irrelevant sources of information.

F. The students will locate information using skimming and scanning techniques.

G. The students will create a topical outline.

II. INTRODUCTORY ACTIVITIES:

A. The teacher, using curriculum guides from grades K-3, will summarize and review all concepts presented.

B. The teacher will demonstrate the use of the almanac in finding facts and its importance as a research tool.

C. The teacher will familiarize the students with the encyclopedia index. Teacher my wish to select topics for the class to locate.

D. The teacher will present a topic for the whole class, reading relevant and irrelevant facts pertaining to that topic. Students will identify which facts are relevant to the topic and tell why.

E. The teacher will demonstrate skimming for information using a chart and highlighter. Discuss with the class the information gathered from the skimming process.

F. The teacher will introduce to students where to locate audio-visual materials and equipment in the library.

G. The teacher will display a chart showing an outline using the question format. Students will work along with the teacher changing each question into a word or phrase.

III. DEVELOPMENTAL ACTIVITIES:

A. The teacher will divide class into groups and assign a topic. Students will use acquired skills to produce a mini report.

B. The teacher will provide small groups with almanacs. Students locate and research topics provided by the teacher or librarian.

C. The teacher will provide a ditto with topics to locate in the encyclopedia index. Students will locate and record pages and subtopics.

D. Using a subject textbook, the teacher will provide topics for students to review. Students will choose and record relevant information for that topic.

DEVELOPMENTAL ACTIVITIES cont'd.

E. The teacher will provide each student with a written passage to skim for details. The teacher asks questions pertaining to important facts. This lesson is repeated - each successive lesson will be timed.

F. Using the school and public library and audio-visual catalogs, students will write the name of a video, a filmstrip, a tape and/or a film which could be used to gather information on a given topic.

G. The teacher will provide each student with a ditto of an outline using the question format. Students will rewrite the outline changing questions to words or phrases.

IV. CONCLUDING ACTIVITY:

Students will produce an independent report containing the following requriements:

A. Note Cards

B. Proper Cover Format

C. Topical Outline

D. Introduction

E. Body of Report

F. Conclusion

G. Bibliography

H. Footnotes

I. Creative Product

J. Oral Presentation
   1. notecards
   2. visual aids

K. Self-evaluation

TEACHER EVALUATION FORM

A = Excellent F = Poor

(Evaluate using grades - A, B, C, D, F)

	GRADE
1. The student recognized and implemented different types of resources.	
2. The student successfully chose relevant information for his/her topic.	
3. The student demonstrated the ability to create a topical outline.	
4. The student was able to construct a concise, informative paragraph using an outline.	
5. The student produced a final report using the proper format.	
6. The student, using notecards, effectively presented an oral report demonstrating knowledge of his/her topic.	
7. The student's creative product displayed effort and original thought.	

STUDENT SELF-EVALUATION SHEET

NAME _____

PROJECT TITLE _____

Directions: On a scale of 1 - 4, rate the following to indicate your evaluation of your project.

		LOW RATING				HIGH RATING
1.	My project includes creative ideas	1	2	3	4	5
2.	I used a number of resources	1	2	3	4	5
3.	My project reflects my own ideas	1	2	3	4	5
4.	My project is well organized	1	2	3	4	5
5.	My project presentation was	1	2	3	4	5
6.	I learned a lot of new information and ideas	1	2	3	4	5
7.	My project shows effort	1	2	3	4	5
8.	My proofreading was	1	2	3	4	5

Resources:

Books I read: _____

_____

_____

Films I watched: _____

_____

_____

People I talked to: _____

_____

_____

Places I visited: _____

_____

_____

Opinions:

What I liked best about doing my project was... _____

_____

_____

_____

If I were to do this project again, I would improve it by...

_____

INQUIRY PROCESS SKILLS - GRADE FIVE

I. LEARNER OBJECTIVS:

A. The student will review all concepts from previous grade levels.

B. The student will identify the purpose and function of the Readers' Guide to Periodical Literature and demonstrate an ability to use it accurately.

C. The student will identify the purpose and function of the New York Times Index and demonstrate an ability to use it accurately.

D. The student will identify the purpose and function of the microfilm machine and demonstrate an ability to use it accurately.

E. The student will demonstrate a working ability of the investigative approach to research through use of an hypothesis, and using the method of conducting surveys to gain information.

II. INTRODUCTORY ACTIVITIES:

A. The teacher, using curriculum guides from grades K-4 will summarize and review all concepts presented in previous grade levels. (1 class).

B. The teacher will review how periodicals (magazines and newspapers) are used as a resource for a research report.

The teacher will present to the students a copy of the Readers' Guide to Periodical Literature. (If the actual resource is not available, teacher may use XEROX copies of pages in the Guide). Demonstrate the use of the Guide and how to locate specific articles in the Guide. (1 to 2 classes)

C. The teacher will present to the students a copy of the New York Times Index. Demonstrate the use of the Index and how to locate specific articles on a specific topic in the Index. (1 class)

D. The teacher will explain to the students the purpose of microfilm, and the purpose of the microfilm machine. The teacher will bring students to the public library, after making arrangements with the reference librarian, to demonstrate how the microfilm machine works. The teacher/reference librarian will show the students the location of the Readers' Guide to Periodical Literature, The New York Times Index, and the microfilm machine. (1 class)

E. The teacher will review the purpose of a research report, the investigative approach to research and the use of an hypothesis. Use APPENDIX 5-1. If necessary, teacher will demonstrate the investigative approach through a group activity. (1 to 3 classes)

III. DEVELOPMENTAL ACTIVITIES:

A. The students will practice all skills from previous grade levels that have not been successfully mastered. Teacher should prepare worksheets or activities on an individual basis to reinforce skills in order to reach mastery level. Suggested worksheets can be found in guides of previous grade levels. (1-2 classes)

B. There is no isolated developmental activity for this concept. Activity should be completed in written form and could also include copies of headlines, ads, etc., and presented in poster form.

C. To practice and demonstrate the ability to use the Readers' Guide to Periodical Literature and the New York Times Index, the students will complete the following activity:

Students will:

1. Select any general topic
2. Locate at least 2 magazine articles on general topic, using the Readers' Guide
3. Locate at least one New York Times article on general topic, using the New York Times Index and microfilm machine
4. Read articles, summarize articles, and list title of magazine, title of article, date of issue and page number.

D. To practice and demonstrate the ability to use the microfilm machine the students will complete the following activity: Select the New York Times microfilm reel for their birthdate. Locate in the New York Times for that day:

1. 5 Major headlines and write a brief summary of the stories.
2. The weather for that day.
3. A new car ad (make, model and price)
4. The closing price for IBM stock
5. At least one other ad
6. Any other interesting information

E. To practice and demonstrate the ability to use the investigative approach to research the student will complete the following activity:

1. Formulate a statement of the problem
2. List facts concerning the problem
3. List possible hypotheses
4. Select an hypothesis
5. Formulate a topical outline

General topic may be selected by teacher or student.

Suggested approach would be the completion of numbers 1 through 4 on APPENDIX 5-2a

IV. CONCLUDING ACTIVITIES:

To demonstrate the ability to use all the skills in the Investigative Research Approach using APPENDIX 5-2a and 2b, the student will:

A. Recognize a problem and formulate a statment

B. List facts concerning the problem

C. List possible hypotheses

D. Select a hypothesis to research

E. Formulate a topical outline on the hypotheses

F. Gather relevant information on notecards. Use magazines, newspapers, conduct surveys, and interviews

G. Organize and analyze information

H. Write introduction and body of report

I. Draw conclusions and state solutions. Include these in the conclusion to the paper.

J. Use checklist to insure proper completion of the report.

V. EVALUATION:

A. Teacher will evaluate the final research report by using an evaluative checklist that includes all skills previously taught. Sample checklists are included in APPENDIX 5-3, 5-4.

B. The student will evaluate his/her own research report by using an evaluative checklist. Sample checklist s included in APPENDIX 5-5.

C. Peer evaluation of research reports will be left to the teacher's discretion based upon the maturity of the students. A suggested checklist is included in APPENDIX 5-6.

VI. RESOURCES AND REFERENCES:

A. School librarian

B. Reference librarian and audio visual specialist at public library

C. The readers' Guide to Periodical Literature

D. The New York Times Index

E. Gifted Program Worksheet "Notes on Writing a Research Report" (APPENDIX 5-7a-b)

THE INVESTIGATIVE APPROACH TO RESEARCH

1.

   A. Recognize a problem or question

   B. Formulate a statement of the problem

2. Search for facts about the problem

3. List possible hypotheses in question form

4.

   A. Select hypothesis to research

   B. Formulate a topical outline

5. Use all possible references to gather relevant information about the hypothesis. If possible, students whould conduct surveys, interview people and use both traditional and nontraditional methods of research. Students should record information on notecards.

6. Organize and analyze information. Using the topical outline as a guide students will write the introduction and the body of the report.

7. Using the relevant research information draw any and all possible conclusions substantiating all conclusions with facts. Students write the conclusion to their report.

WORKSHEET FOR INVESTIGATIVE RESEARCH

NAME_____ DATE_____

1. Statement of problem:_____

2. List of facts concerning the problem:

3. Possible hypotheses in question form:

4. a. Select hypothesis to research:_____

   b. Formulate topical outline on hypothesis. Use the back of this sheet.

5. Gather relevant information on notecards. Be sure to use a variety research sources. Magazines and newspaper articles must be used. Do not forget to talk to people, local authorities on your subject, or write to organizations or people. Do not forget to write the sources of your information on your notecards. You will need this information later to do your bibliography.

6. Organize and analyze the information you have gathered. Remember to discard all irrelevant information. Arrange your information (notecards) to coincide with your outline. (You may wish to color code your notecards.) Now, following each topic in your outline, begin to write your report. Remember to write an introductin to your paper. Include in this introduction your hypothesis.

WORKSHEET FOR INVESTIGATIVE RESEARCH cont'd.

7. End your report with any and all possible solutions or conclusions you have discovered from your research. Everything you state in your conclusion must be supported by facts you have found in your research.

GOOD LUCK!!!!!

BEFORE TURNING IN YOUR PAPER PLEASE CHECK TO SEE THAT YOUR PAPER IS COMPLETE:

1. Cover page has all the necessary information
2. Your outline is done in topical format
3. Introduction to the paper states you hypothesis
4. Body of your report flows from your outline
5. Your conclusion states your discoveries and is supported by facts
6. All quotes in the body of your report have references in parentheses
7. Bibliography follows specified format
8. Spelling, punctuation and grammar have been double checked
9. Your handwriting is legible

TEACHER CHECKLIST FOR WRITTEN REPORT EVALUATION

APPENDIX 5-3

		RATING	COMMENTS
1.	Cover page	A B C D F	
2.	Outline	A B C D F	
3.	Introduction is clear and states hypothesis	A B C D F	
4.	Body flows from outline	A B C D F	
5.	Conclusion states discoveries and is supported by facts	A B C D F	
6.	Quotes are referenced	A B C D F N/A	
7.	Bibliography - format	A B C D F	
8.	Bibliography - variety of sources	A B C D F	
9.	No evidence of plagiarism	A B C D F	
10.	Spelling	A B C D F	
11.	Punctuation/Capitalization	A B C D F	
12.	Grammar	A B C D F	
13.	Handwriting	A B C D F N/A	

APPENDIX 5-4

TEACHER CHECKLIST FOR ORAL REPORT

1.	Spoke clearly and loudly	A B C D F
2.	Looked at the audience	A B C D F
3.	No excessive body movements	A B C D F
4.	Information presented in concise and orderly format	A B C D F
5.	Ended report with a logical and summarizing conclusion	A B C D F
6.	Use of visual aids	A B C D F

NOTE: A = Excellent F = Poor

NAME OF STUDENT:_____ DATE_____

SELF CHECKLIST FOR REPORT EVALUATION

		RATING
1.	My cover page contains all the necessary information	1 2 3 4
2.	My outline is clear, logical and written in topic format	1 2 3 4
3.	My introductin states the hypothesis and purpose of my report	1 2 3 4
4.	The body of my report flows from my outline	1 2 3 4
5.	My conclusion states my discoveries and is all supported by facts	1 2 3 4
6.	Whenever I used quotes I indicated my references within parentheses in the body of my report	1 2 3 4
7.	My bibliography is written in correct format	1 2 3 4
8.	My bibliography shows that I've used a variety of sources	1 2 3 4
9.	I have not directly copied, word for word, any of my information	1 2 3 4
10.	There are not spelling mistakes	1 2 3 4
11.	My punctuation and capitalization is correct	1 2 3 4
12.	There are no run-on sentences in my report	1 2 3 4
13.	My handwriting is legible	1 2 3 4

NOTE: 1 = Excellent 4 = Poor

COMMENTS:

NAME:_____ DATE:_____

PEER EVALUATION CHECKLIST

WRITTEN REPORT:		RATING
1.	The cover is complete	1 2 3 4
2.	The outline is logical	1 2 3 4
3.	The introduction states the hypothesis	1 2 3 4
4.	The body of the report could be understood easily	1 2 3 4
5.	The conclusion clearly stated the discoveries	1 2 3 4
6.	The bibliography is written correctly	1 2 3 4
7.	A variety of references have been used	1 2 3 4

ORAL REPORT:		
1.	Spoke clearly and loudly	1 2 3 4
2.	Looked at the audience	1 2 3 4
3.	No unnecessary body movement	1 2 3 4
4.	Presented information orderly and clearly	1 2 3 4
5.	Ended report with a logical conclusion	1 2 3 4

NOTE: 1 = Excellent 4 = Poor

COMMENTS:

NAME OF STUDENT WHO WROTE REPORT: _____

NAME OF STUDENT RATING THE REPORT: _____

NOTES ON WRITING A RESEARCH REPORT --- BASIC CONPONENTS

I. COVER PAGE

Title of Report

Name of Student

Date paper is due

II. OUTLINE

(Done in topical format; use Language book for reference)

III. BODY OF REPORT

IV. FOOTNOTES

If direct quotes are used reference is made in the body of the report with the use of parentheses.

EXAMPLE:

My research shows that snakes are very complex creatures. "Snakes are the most complex and interesting creatures in the world." (The First Book of Snakes, p. 17).

V. BIBLIOGRAPHY

See format below. Categories should be used as they are presented and references listed in alphabetical order by author/editor.

BIBLIOGRAPHY

I. BOOKS

Author. Title.
Place of Publication: Publisher. Date.

Jones, Mary. Life on Mars.
New York: McGraw-Hill. 1959

II. ENCYCLOPEDIAS/ALMANACS

Editor's Name, ed. Name of Encyclopedia or Reference.
Place of Publication: Publisher. Date. Volume.

Smith, Jim, ed. World Book Encyclopedia.
New York: McGraw-Hill. 1986. Volume 4.

III. PERIODICALS/NEWSPAPERS

Author of Article. "Title of Article." Title of Periodical.
Volume: page. Date of Periodical.

Brown, Mary. "Snakes and Birds". Ranger Rick.
36:17-19. April 1988.

CREATIVE COMMUNICATION THROUGH WRITING

GENERAL DESCRIPTION

The Creative Communication Through Writing framework was designed to accompany the existing Long Branch Language and Writing Across the Curriculum guides. Many opportunities for creative writing are already present in the district guides and the students in the gifted program will have further experiences in creative writing with a concentration on specific writing forms at each grade level as follows:

Kindergarten	- Prewriting readiness through role playing and story telling
Grade One	- Letterwriting
Grade Two	- Writing Fiction 1
Grade Three	- Writing Fiction 2
Grade Four	- Journal Writing in the Affective Areas
Grade Five	- Poetry and Newspaper Journalism

GENERAL OBJECTIVES

1. Emphasize the process of composing, giving special emphasis to pre-writing and revising
2. Encourage the students to explore self and peer awareness
3. Develop and enrich student ability to think creatively
4. Establish foundations for mature and technically correct writing
5. Foster an enjoyment of writing and seeing one's writing in print

COMMENTS TO THE TEACHER

This outline and list of resources is intended to assist the teachers in planning for enrichment in written communication skills. These enrichment activities should be introduced after students have mastered the language and writing skills taught at their grade level. Students should be encouraged to submit their writing for publication as often as possible.

PRE-WRITING: ROLE-PLAYING AND STORY TELLING

Role-playing is a suitable aspect of creative communication on the kindergarten level because it is a means of expressing ideas prior to writing. Role-playing can be used for a variety of purposes. It is a way of fostering feelings of self-worth, of interacting with peers and an approach to problem solving in a given situation.

This unit can be presented in a variety of ways. Below is a suggested format:

I. Introduction to Role-playing
   - A. Purpose
   - B. Procedure
     1. Characters (who)
     2. Plot (what)
     3. Setting (where)

II. Types
   - A. Puppetry
   - B. Plays
   - C. Flannel board story telling
   - D. Open-ended stories
   - E. Problem situations
   - F. Dance and Song
   - G. Pantomime

III. T.A. (Transitional Analysis) for tots
   - A. Introduction
   - B. Prinzes and frozzes
   - C. Warm fuzzies
   - D. Cold pricklies
   - E. Angry feelings
   - F. Afraid and what to do about it

TEACHER RESOURCES

Catron, Carol Elaine and Parks, Barbara Catron, Cooking Up a Story, Minneapolis, Minnesota. T.S. Denison and Co., Inc. 1986

Catron, Carol Elaine and Parks, Barbara Catron, Super Story Telling, Minneapolis, Minnesota. T.S. Dennison and Co., Inc. 1986

Freed, Alvyn M. T.A. For Tots, Rolling Hills Estates, Californ ı, Jalmar Press, 1984

Roets, Lois, Incomplete Plays, New Sharon, Iowa, Leadership Publishers, Inc., 1987

KINDERGARTEN

RESOURCES OF CHILDREN'S BOOKS

Carle, Eric, The Very Hungry Caterpillar, Cleveland, Ohil, Collins World Pub., Co., Inc., 1979

Freeman, Don, A Pocket for Corduroy, New York, Viking Press, 1978

Gag, Wanda, Millions of Cats, New York, Coward-McCann, Inc., 1928

Keats, Ezra Jack, The Snowy Day, New York, Macmillan Co., 1976

Piper, watty, The Little Engine That Could, New York, Platt and Munk, 1957

Sendak, Maurice, Where the Wild Things Are, New York, Harper and Row, 1947

Slobdkina, Esphyr, Caps for Sale, Reading, Mass., Addison-Wesley Pub., Co., 1940

Tresselt, Alvin, The Mitten, New York, Lothrop, Lee, and Shepard Co., Inc., 1965

LETTER WRITING - GRADE ONE

Letter writing will be used as a vehicle for creative communication in the first grade. It is a suitable aspect of writing because it fosters creativity, it is self-directed and it is an appropriate means of interaction with others in society.

The student will recognize the many purposes of letter writing. The following outline is a suggested approach to teaching this ongoing unit.

I. INTRODUCTION
   - A. Purpose of letter writing
   - B. Occasions for letter writing

II. TYPES OF LETTERS
   - A. Friendly
   - B. Business
   - C. Notes and Cards
     1. post cards
     2. thank you notes
     3. get well cards
     4. congratulations card
   - D. Invitations

III. STRUCTURE
   - A. Letters
   - B. Envelope addressing

ADDITIONAL ACTIVITIES

   - A. Creating personal stationery
   - B. Pen pal program
   - C. Designing and printing postcards
   - D. Design a box of special occasion cards

WRITING FICTION - GRADES 2 and 3

Writing fiction, because it is an avenue of self-expression, is a suitable course of study for our gifted students. The ability to create characters that live in a story, to establish a setting that is believable and to develop an interesting plot requires imagination, clear thinking, and organizational skills. This unit is intended to help young writers succeed in seeing their words in print and to have these words tell something of interest.

I. INTRODUCTION TO WRITING FICTION:

- A. Students list favorite fiction books.
- B. Brainstorm the reasons that these books are favorites.

II. TYPES OF FICTION - INTRODUCE:

- *A. Fables
- *B. Tall Tales
- *C. Folktales
- *D. Mystery
- *E. Adventure
- *F. Fairytales
- **G. Fantasy
- **H. Science
- **I. Realistic
- **J. Historical
- **K. Myths
- **L. Legends

III. ELEMENTS OF A STORY:

- *A. Characters
- *B. Setting
- *C. Plot
- **D. Conflict
- *E. Resolution/Conclusion
- *F. Title

WRITING FICTION - GRADES 2 and 3 cont'd.

IV. ORGANIZATION:

*A. Introduction

*B. Main Part

*C. Conclusion

**D. Paragraph Development

**E. Dialogue

V. *WRITING A STORY:

A. Prewriting

1. Creating conflicts for plot

2. Creating settings

3. Creating characters

4. Planning a story

B. First Draft

C. Revision

1. Peer or

2. Teacher

D. Edit

E. Final Draft

VI. PUBLISH OR DISPLAY STUDENT WRITING AS OFTEN AS POSSIBLE:

KEY: *Introduced in Grade 2 - reinforced in Grade 3

**Introduced in Grade 3

RESOURCES:

A. Suggested books for students

1. The Little Cow and the Turtle,
by Meindert DeJong (Animal)

2. Henry Huggins, and others,
by Beverly Cleary (Realistic)

3. Treasure Island,
by Robert Louis Stevenson (Adventure)

4. The Treasure in the Little Trunk,
by Helen Orton (Mystery)

5. The Secret Valley,
by Clyde Bulla (Historical)

RESOURCES cont'd.

6. Aesop's Fables, The Ugly Duckling, (Fables)

7. Book of Greek Myths, by Ingri D'Aulaire (Myths)

8. Pecos Bill and Lightning, by Leigh Peck (Tall Tale)

9. The King's Drum and Other Stories, by Harold Courlander (Folktales)

10. Mr. Popper's Penquins, by Richard Atwater (Fantasy)

11. Wonderful Flight to the Mushroom Planet (Science)

B. Suggested Books for Teacher

1. Writing Fiction, Lois Roets

2. Children and Books, May Hill Arbuthnot

3. Composition Capers, Sally Shaw

4. Stir Up A Story, Linda Polon

5. Adventures in Creative Writing, Wnedy Weir

EVALUATION SHEET

TEACHER CHECKLIST FOR WRITING STORIES

GRADE TWO

Student's Name_____ Date_____

Grade /__/OUTSTANDING /__/SATISFACTORY /__/NEEDS IMPROVEMENT

	YES	NO
1. Appropriate title		
2. Interesting beginning		
3. Character identification/description		
4. Setting established/mentioned		
5. PLOT: a. Good development (conflict/ turning point)		
b. Order of events (sequential/ logical)		
6. Conclusion - conflict resolution		
7. WRITING STYLE:		
a. Expresses things clearly		
b. Vocabulary is varied/evokes feelings		
c. Dialog us used		
8. ORGANIZATION:		
a. Paragarph format		
b. Main ideas		
c. Details		
d. Sentence-structure		
e. Neatly written		
9. MECHANICS: ACCURACY OF:		
a. Spelling		
b. Capitalization		
c. Punctuation		
d. Grammar		

STUDENT CHECKLIST FOR WRITING STORIES

GRADE TWO

		YES	NO
1.	My story has an interesting title.		
2.	My introduction tells about the people (characters) in the story in an interesting way.		
3.	My introduction tells where the story takes place (setting).		
4.	The main part of my story tells what the characters do.		
5.	The main part of my story has things happening in order.		
6.	The ending of my story tells how things worked out.		
7.	What I wrote makes sense.		
8.	My story is written in paragraph form.		
9.	I indented the first word of each paragraph.		
10.	The sentences in each paragraph tells about the main idea.		
11.	I used details to support my main ideas.		
12.	I used complete sentences.		
13.	My sentences do not run-on.		
14.	The words I used are spelled correctly.		
15.	I have capitalized correctly		
16.	I have punctuated correctly.		
17.	I used correct grammar		
18.	My story is neatly written.		

CREATIVE WRITING CHECKLIST

NAME _____ DATE _____

TITLE _____

☐ OUTSTANDING ☐ SATISFACTORY ☐ NEEDS IMPROVEMENT

	Composition has a beginning, middle and conclusion
	Introduction is interesting
	Setting is well described
	Characters are described and come alive
	Plot has a problem or conflict
	Plot is interesting
	The problem is solved
	The conclusion is strong
	There is colorful language and style
	Paragraphs are used correctly
	Dialogue is used correctly
	Punctuation correct
	Grammar correct
	Spelling correct
	Appearance is neat

JOURNAL WRITING - GRADE 4

Creative communication, through journal writing, fosters self-discovery, personal integrity, and feelings of self-worth. The fourth grader is beginning to experience new feelings and situations, and journal writing will assist in the quest for self-knowledge. Frequent, private writing has both therapeutic and technical value.

The writing for this component will be directed by a choice of topics on which children will record their ideas. The following outline is a suggested approach to teaching journal writing:

I. INTRODUCTION:

- A. Purpose
- B. Format

II. TYPES OF ENTRIES:

- A. Expression of feelings
- B. Relating experiences
- C. Problem solving
- D. Planning
- E. Exploration of self

III. JOURNAL WRITING:

- A. Writing topic
- B. Class discussion

RESOURCES:

1. Schmitz, Connie C. and Galbraith, Judy. Managing The Social And Emotional Needs Of The Gifted, 1985, Free Spirit Publishing Co.
2. Johnson, Spencer and Johnson, Constance. The One Minute Teacher, 1986, William Morrow and Company, Inc.
3. Fort, Imogene. The Me I'M Learning To Be, 1983, Incentive Publications, Inc.

SUGGESTED STUDENT TOPICS:

1. Success
2. Failure
3. What feelings do we give others?
4. What feelings do others give us?
5. What hurts you?
6. What makes you feel good about yourself?
7. What are some of the reasons people like each other?
8. What would you like to be remembered for?
9. How do people make friends?
10. What is loyalty?

POETRY - GRADE 5

Poetry, because it enriches our lives, inspires, teaches, and helps children to see things in greater detail or in a different way is a suitable course of study for gifted students.

The study of poetry stimulates children to develop images, moods and ideas. Poetry helps children develop critical thinking skills and requires thought, creativity and organization.

This unit can be presented in a variety of ways. Below is a suggested format:

I. INTRODUCTION TO POETRY:

- A. Read and discuss a variety of poems together. (see Resource List).
- B. Brainstorm for the purpose of poetry.
- C. Analyze poems for MOODS which they may create.

II. DEVICES USED IN POETRY:

- A. Rhythm, rhyme and repetition
- B. Alleteriation
- C. Onomatopoeia
- D. Personification
- E. Simile and metaphor
- F. Blank or free verse

III. TYPES OF POETRY:

- A. Couplet
  - 1. 2 line couplet
  - 2. 3 line couplet
  - 3. 4 line couplet
- B. Cinquain
- C. Haiku
- D. Clerihew
- E. Limerick
- F. Diamante

IV. WRITING POETRY:

- A. Choose type of poem.
- B. Choose typic/subject
- C. Brainstorm for adjectives relating to subject
- D. Brainstorm for when, or where, the action will take place
- E. Write poem, with title

POETRY - GRADE 5 cont'd.

V. RESOURCES:

A. Suggested Books:

1. Poems For Red Letter Days,
Elizabeth Sechrest

2. A Little Laughter,
Katherine Love

3. You Come Too,
Robert Frost

4. Cambridge Book of Poetry for Children,
Kenneth Graham

B. Suggested Poems:

1. "Annabel Lee" by Edgar Allen Poe

2. "Casey at the Bat" by Ernest L. Thayer

3. "Daffodils" by William Wordsworth

4. "If" by Rudyard Kipling

5. "The New Colossus" by Emma Lazarus

NEWSPAPER - GRADE 5

Newspaper, because it awakens young minds to the world around them, is a suitable course of study for gifted students.

The study of the newspaper introduces students to both the problems facing today's world and possible solutions to these problems. By the study of today's society through the medium of the newspaper students will become aware of the need to acknowledge individual differences in today's world and to utilize an open-minded and critical thinking approach to life.

This unit can be presented in a variety of ways. Below is a suggested format:

I. INTRODUCTION:

- A. Background and history of newspapers
- B. Freedom of the press
- C. Differences in newspapers

II. NEWSPAPER JARGON:

- A. Flag, Ears, Masthead, Index
- B. Headlines
- C. By-lines, datelines, wire services
- D. Photos

III. SECTIONS OF A NEWSPAPER:

- A. Hard news story
- B. Feature articles
- C. Opinions/editorials/commentary
- D. Culture/recreation/sports
- E. Humor/weather/business
- F. Display advertising
- G. Classified ads

IV. WRITING AND THE NEWSPAPER:

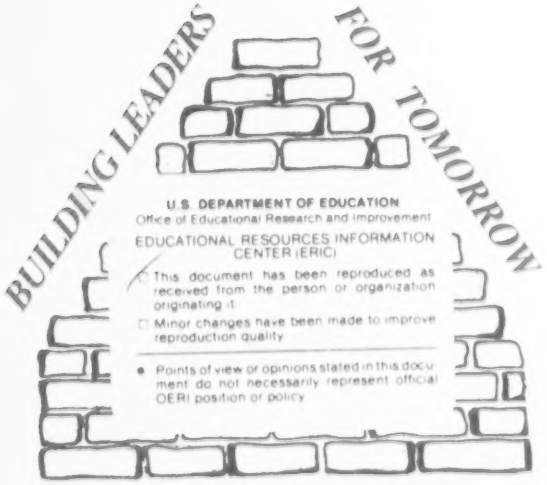
- A. Journalism
- B. Interviewing
- C. Lead paragraphs and 5 w's
- D. Evaluating a news article

NEWSPAPER - GRADE 5 cont'd.

COMMENTS TO TEACHER:

- Contact local newspapers for Newspaper in Education programs
- Develop newspaper scrapbooks illustrating parts of the newspaper
- Visit a newspaper plant
- Invite a professional journalist to speak to the students
- Develop a classroom/school newspaper

LONG BRANCH PUBLIC SCHOOLS
LONG BRANCH, NEW JERSEY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GIFTED PROGRAM PARENT HANDBOOK

by

Lea Reich, Team Leader & Linda Colaguori

JUNE 1989

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WHAT IS THE HISTORY OF THE PROGRAM?

The Long Branch School District's Gifted Magnet Program began in the fall of 1979 with a task force of administrators, teachers and community members. Prior to program implementation, the task force and a committee of teachers researched the field of gifted education, developed program goals and devised a skeletal curriculum.

The program started with three self-contained classes for grades three, four and five. Students were selected from the district's six schools to form these gifted classes. The program was housed in the Anastasia School. Students were invited to join the program after a district-wide screening of achievement test scores in reading comprehension and math, teacher nominations, peer nominations and parent nominations.

The project was expanded until ultimately it became a K-5 Gifted Program.

WHAT IS THE PHILOSOPHY OF THE PROGRAM?

The Long Branch School System seeks to provide an elementary program (K-5) which addresses itself to the needs and learning styles of its academically gifted students. Long Branch administrators and teachers have developed a program of instruction which follows a planned scope and sequence assuring that the differentiated curriculum provided to its gifted students is articulated across grade levels and is aligned with the general curriculum of the district.

Student outcomes are expected to involve the development of:

- significant achievement in subject disciplines
- a positive self-image
- an appreciation of personal commitment to tasks
- proficiency in applying the higher level thinking skills of application, analysis, synthesis and evaluation

WHAT ARE THE GOALS AND OBJECTIVES OF THE PROGRAM?

The Long Branch School System seeks to provide its gifted elementary students with a carefully planned program by establishing a framework of educational experiences which are differentiated from those already presented in the regular classroom and offering a variety of subject areas. At the same time, students are encouraged to develop their present interests and achieve the benefits of their innate abilities. The basic goals which are interwoven throughout each curriculum guide are:

- enhancing cognitive skills
- developing the higher level thinking processes of application, analysis, synthesis and evaluation
- engaging the student in self-directed independent work
- providing an enriched learning environment appropriate to the needs of high potential students
- providing learning experiences designed to foster personal integrity and feelings of self-worth
- developing an awareness of the role of the gifted individual within society
- developing an awareness and appreciation for the resources (human and natural) in our community

WHAT EDUCATIONAL STRATEGIES ARE USED TO ENRICH THE ACADEMIC EXPERIENCES OF STUDENTS?

- compacting of curriculum through pre-testing and mastery testing to allow for acceleration
- increased opportunities at each grade level which allow for self-directed learning with accountability through contracts and research projects
- discussion and debate techniques stressing intelligent questioning and responding
- the use of field trips, guest speakers and community resources to reinforce and inspire the learning situation
- the use of literature, the study of famous people, public speaking, the social studies curriculum and class discussions/projects to develop social competence and leadership
- questioning techniques and Bloom's Taxonomy exercises which promote the higher thought processes

WHAT TRAITS DO WE WANT TO PROMOTE IN OUR STUDENTS?

The gifted curriculum is designed to promote the twelve student traits identified as desirable characteristics in the Long Branch Public Schools Model. These traits are:

- Leadership
- Planning
- Communication
- Risk taking
- Problem solving
- Decision making
- Self-sufficiency
- Task commitment
- Fluency
- Acceptance of self and others
- Motivation
- Curiosity

HOW DOES THE GIFTED CURRICULUM DIFFER FROM THE REGULAR CLASSROOM?

The program attempts to relate content to broadbased issues and problems (current events, science units, social studies, economics, language arts), to master complex, higher level thinking skills, to develop research skills and methods, and to express learnings in creative ways to different audiences.

The curriculum is both accelerated and enriched. The basic Long Branch curriculum is reviewed for skill mastery at grade level in mathematics, reading and spelling, and accelerated where needed. Enrichment occurs through commercial materials (Jr. Great Books and CSMP math program) and district developed curriculum guides for basic objectives, year long science, economics, computer, creative written communication, and independent study/inquiry process units for each grade level.

MAJOR AREAS OF THE CURRICULUM

Language Arts

The basic goal of the language arts program is the development of highly proficient reading and communications skills. The Junior Great Books program enriches the accelerated basal (Economy) reading series by inquiring, through discussion, the interpretation of the author's meaning. Students have many opportunities for expanding their oral and written communication skills via individual and group projects derived from the district developed curriculum.

Mathematics

The district's math program (Macmillan) is used in conjunction with enrichment in the CSMP math program. CSMP develops the mathematical process skills of generalizations, pattern recognition, classificiation, abstraction, and creative, strategic and critical thinking.

Computer

Computer lessons are sequenced through each grade to promote computer awareness, keyboard familiarity, experiences with a variety of problem-solving software, word processing, and programming in LOGO and BASIC. The ultimate goal, in addition to computer literacy, is to encourage logical and creative thinking through computer experimentation and computer applications.

Science

COURSE DESCRIPTION
Each grade in the gifted program has a year-long enrichment science curriculum, in addition to the district's developmental science program. Activities and lessons have been planned to provide for maximum student involvement in discussion and application of inquiry skills, observation and prediction of results, use of concepts and terminology, and collection and analysis of data.

THEME
The theme spanning the six grade levels is "Mankind's Interaction With His Environment." Rather than studying the natural world itself, our goal is to allow our students to gain an awareness of the interdependence of man and these natural systems.

Economics

RATIONALE
Economics, the study of how society allocates its resources, is a suitable course of study for gifted students. The necessity to wisely choose among the alternative uses of resources will be brought into the lives of the students through the examination of the principles of personal, community, national and global economics.

THEME
The theme of the student as a human resource, a producer as well as a consumer, flows through the six grades.

COURSE DESCRIPTION
Activities are planned at each grade level to have students actually experience operating a business or participating in mini-economics. Key concepts at each grade level are aligned with the district's social studies concepts and are articulated across grade levels.

Inquiry Process and Independent Learning Skills

RATIONALE
Not all gifted students are self-directed independent learners. They need to practice the skills needed to conduct their own research, direct their own study, and hopefully become life-long learners. They need practical skills to be able to manage their time, sequence activities and identify resources.

COURSE DESCRIPTION
This course of study was planned to assist students in learning to identify their goals and objectives, assess the skills they need to acquire, determine how they will go about their learning and to evaluate their own performance. It provides the teachers in the program with a systematic approach to teaching these necessary skills.

Creative Communication Through Writing

GENERAL DESCRIPTION
The Creative Communication Through Writing framework was designed to accompany the existing Long Branch Language and "Writing Across the Curriculum" guides. Many opportunities for creative writing are already present in the district guides and the students in the gifted program will have further experiences in creative writing with a concentration on specific writing forms at each grade level.

GENERAL OBJECTIVES

1. Emphasize the process of composing, giving special emphasis to pre-writing and revising
2. Encourage the students to explore self and peer awareness
3. Develop and enrich student ability to think creatively
4. Establish foundations for mature and technically correct writing
5. Foster an enjoyment of writing and seeing one's writing in print

HOW ARE STUDENTS CHOSEN FOR THE PROGRAM?

In order to plan and implement an efficient process for identifying gifted students, the word gifted must be clearly defined.

The Long Branch School District uses the New Jersey State Department of Education definition:

> *Gifted means a pupil who has demonstrated and/or is capable of exceptional performance, accelerated comprehension and assimilation of content, exceptional capacity for abstract, creative and divergent thinking in academic or out-of-school activities and who requires a differentiated educational program beyond that normally provided by the school district.*

CRITERIA FOR KINDERGARTEN

Long Branch uses multiple identification procedures to identify kindergarten students who are gifted. The identification procedures include the following:

Howell Pre-Kindergarten Screening Test (Achievement screening for readiness test)

Slossen Intelligence Test

Parent Questionnaire

Optional recommendations from pre-school teachers and other individuals or agencies having pertinent information

CRITERIA FOR GRADES 1 - 5

The Long Branch district has an ongoing commitment to monitor annually all students for possible inclusion in the program. Class size is limited to 25 students and eligible students are selected from a waiting list each year. Each teacher in the district is asked to review student progress and to recommend eligible students for entrance into the program. The review includes:

Standardized test scores at the 90 percentile or above in reading and math

Teacher recommendation

Parent recommendation

Report card grade of A average in major subjects

DO STUDENTS AUTOMATICALLY REMAIN IN THE PROGRAM FROM YEAR TO YEAR?

In an effort to truly meet the needs of the students in the Long Branch Gifted Program exit procedures have been established for students experiencing difficulty in the program. The district appreciates the fact that the removal of a child from the program may be disappointing to the child and parents. However, this initial disappointment is minor when weighed against the rising level of frustration and unhappiness caused by not being able to successfully compete with one's peers. In these cases, where the welfare of the child is of paramount concern, exiting the child from the program must be carefully considered. The procedures listed below are applied in all cases where a child is being considered for a return to his/her home base school.

PROCESS

The Exit Procedures are composed of a complete review of the child's academic and social adjustment to the Gifted Program. Included in this review are an examination of the following areas:

Teacher Evaluation

Academic Progress and Class Performance

Achievement Test Scores

Parent Evaluation

Self-Evaluation

Parents will receive a verbal alert followed by a written notification, if their child is experiencing great difficulty in the program.

CRITERIA FOR PLACEMENT IN THE MIDDLE SCHOOL GIFTED PROGRAM

Fifth Grade Student into Sixth Grade Gifted Program for Reading, English, Science and Social Studies:

1. CTBS scores of 90 national percentile or better in total reading

2. Previous gifted placement

3. Teacher recommendation

4. Report card grades — at least B average for year in major subject areas

Fifth Grade Student — Not in Gifted Program — into Sixth Grade Gifted Program for Reading, English, Science and Social Studies:

1. CTBS scores of 90 national percentile in total reading

2. Teacher recommendation

3. Report card grades — A average for the year in major subject areas

Fifth Grade into Sixth Grade Gifted Program for Math:

1. CTBS 90 national percentile total math AND 80 national percentile total reading

2. Previous placement

3. Teacher recommendation

4. Report card grade of B or better in math for 5th grade gifted students OR A in math for students not previously in the Gifted Program

Sixth Grade Student Into Seventh Grade Gifted

1. CTBS test and/or placement test scores
2. Teacher recommendation
3. Report card grades — B average
4. Classroom performance

Seventh Grade Student Into Eighth Grade Gifted Classes

1. CTBS test and/or placement test scores
2. Teacher recommendation
3. Report card grade — B average
4. Classroom performance

HOW CAN PARENTS OF STUDENTS IN THE PROGRAM BECOME INVOLVED IN THEIR CHILD'S EDUCATION?

- Join the West End/Gregory School's Parent Support Group for Gifted Education
- Attend activities in which your child is involved
- Share your hobbies, interests and career with your child's class
- Assist your child's class with projects, programs and trips
- Acquire a knowledge of your child's topics of study for the year and incorporate them into family discussions

HOW CAN I HELP MY CHILD AT HOME?

Homework

1. Provide a specific time and place for homework.
2. Check to see that homework is completed.
3. Have good reference materials available — newspapers, atlas, dictionary, globe and encyclopedia.

Experiences

1. Take trips and short excusions that relate to your child's interests or which will spark new interests. Involve your child in the planning.
2. Provide worthwhile activities that will develop a well-rounded child.
3. Encourage your child with active rather than passive activites such as starting a collection, a hobby, doing experiments or investigating an interest.
4. Visit the library regularly.
5. Give gifts such as books, kits and games that center around your child's interests.

200

RESOURCES FOR PARENTING THE GIFTED

Here are some organizations and publications for and about the gifted from Challenge Magazine:

GOOD APPLE, INC.
P.O. Box 299
1204 Buchanan Street
Carthage, Illinois 62321-0299

AMERICAN ASSOCIATION FOR GIFTED CHILDREN
140 East Monument Avenue
Box 2745
Dayton, Ohio 45401
$25 per year
No journal. Emphasis is on cooperation with community and professional groups as well as meeting the needs of the gifted in the arts and humanities. Several publications available.

GIFTED CHILDREN MONTHLY (especially for parents)
Box 10149
Des Moines, Iowa 50340
$24 per year (11 issues)

***G/C/T (of interest to teachers)**
Box 6448
Mobile, Alabama 36660
$24 per year (6 issues)

***G/C/T also publishes Chart Your Course (by and for gifted children)**
Box 6448
Mobile, Alabama 36660
$15 per year — new subscribers only (8 issues)

NATIONAL ASSOCIATION FOR GIFTED CHILDREN
4175 Lovell Road
Box 30, Suite 140
Circle Pines, Minnesota 55014
$35 per year
Journal: Gifted Child Quarterly (research)

ROEPER REVIEW (research)
Box 329
Bloomfield Hills, Michigan 48013
$22 per year (4 issues)

The Association for the Gifted (TAG) Division of the Council for Exceptional Children (CEC)
Journal for the Education of the Gifted (research)
Wayne State University Press
5959 Woodward
Detroit, Michigan 48202
$20 per year (4 issues)

WORLD COUNCIL FOR GIFTED AND TALENTED CHILDREN
H M S 414
University of South Florida
Tampa, Florida 33620
$40 for two years
Journal: Gifted International (world perspective)

***G/C/T and Chart Your Own Course are both being renamed.**

BOOKS

The Gifted Child's Survival Guide.
Judy Galbraith

Gifted Children: A Guide for Parents and Teachers.
Virginia Z. Ehrlich

Somewhere to Turn: Strategies for Parents of the Gifted and Talented.
Eleanor Hall and Nancy Skinner

This project has been funded with a grant from the New Jersey Gifted Education Grant Program administered by the New Jersey State Department of Education, Division of General Academic Education

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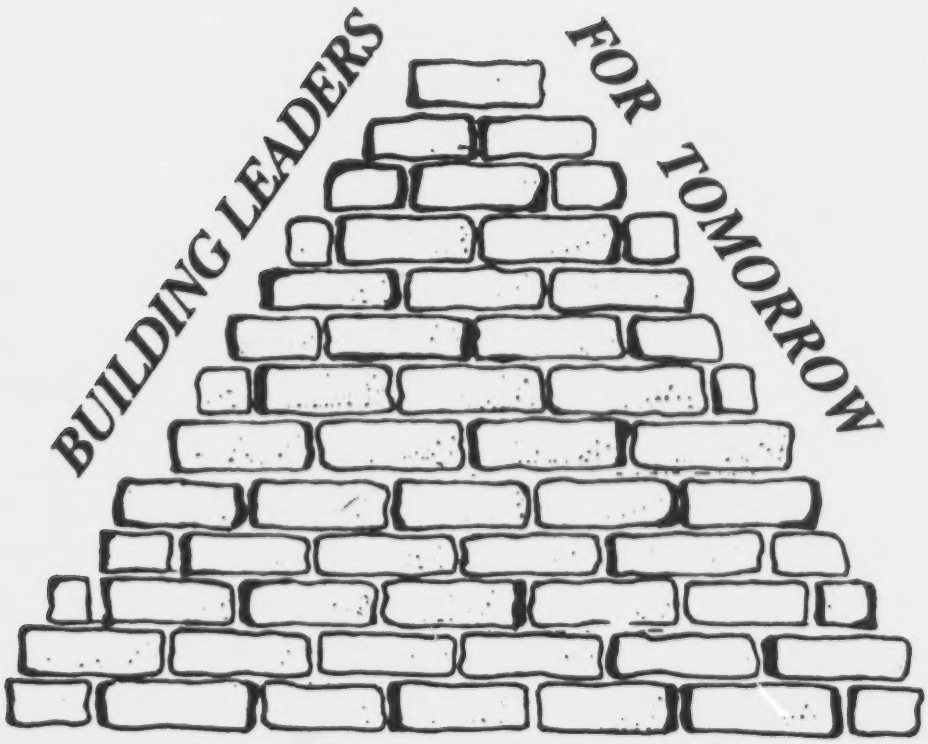

LONG BRANCH GIFTED PROGRAM
K - 5

PROGRAM DESCRIPTION

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PROGRAM DESCRIPTION

INTRODUCTION

The Long Branch School System seeks to provide an elementary program (K-5) which addresses itself to the needs and learning styles of its academically gifted students. Long Branch administrators and teachers have developed a program of instruction which follows a planned scope and sequence assuring that the differentiated curriculum provided to its gifted students is articulated across grade levels and is aligned with the general curriculum of the district.

In addition to the district curriculum, the 150 students in the six self-contained classrooms of this program receive an enriched course of study which features learning experiences designed to highlight the aptitudes of gifted learners. Specialized materials include CSMP math, Jr. Great Books, and district developed curricula in science, economics, independent study, computer, and writing.

Student outcomes are expected to involve the development of:

-significant achievement in subject disciplines

-a positive self-image

-an appreciation of personal commitment to tasks

-proficiency in applying the higher level thinking skills of application, analysis, synthesis and evaluation

BACKGROUND

The Long Branch School District's Gifted Magnet Program began in the fall of 1979 with a task force of administrators, teachers and community members. Prior to program implementation, the task force and a committee of teachers researched the field of gifted education, developed program goals and devised a skeletal curriculum.

The program started with three self-contained classes for grades three, four and five. Students were selected from the district's six schools to form these gifted classes. The program was housed in the Anastasia School. Students were invited to join the program after a district-wide screening of achievement test scores in reading comprehension and math, teacher nominations, peer nominations and parent nominations.

The project was expanded until ultimately it became a K-5 Gifted Program.

RESEARCH

The success of the Long Branch Public Schools K-12 Gifted Education Program has been predicated on the theory that the curriculum for this program had to be research based, cooperatively developed, well articulated, and effectively implemented. Our primary instructional goal was and continues to be three-fold: first, to develop critical and creative thinking skills; second, to enhance skills in the cognitive and affective domains; and third, to involve students in diverse learning situations selected to promote the twelve student traits identified as desirable characteristics in the Long Branch Public School's Gifted Education Model:

Task Commitment	Fluency	Motivation
Planning	Leadership	Acceptance of Others
Communication	Decision Making	Risk Taking
Self-Sufficiency	Acceptance of Self	Problem Solving

Irving S. Soto in his paper entitled, Resolving Critical Curriculum Issues Through the C3 Model, notes that "...one of the first issues to be encountered in writing curriculum for the gifted student is the fragmentation or lack of continuity and articulation." The problem is caused by the unilateral development of vague and often unfocused curriculum. As a result, too many school districts teach from curriculum guides that lack continuity and articulation. The Long Branch curriculum avoids this fragmentation via the "togetherness" type of planning that includes only focused goals and objectives developed in a cooperative manner to ensure that the program of instruction follows a planned scope and sequence and is articulated across grade levels and is aligned with the general curriculum of the district.

The Long Branch Gifted Program relates content to broad-based issues and problems; integrates content with multiple disciplines; allows the student to master complex, productive, abstract higher order thinking skills and further develops research skills in methods that allow the student to communicate these learnings to diverse audiences. Additionally, the program is designed to meet the social, cultural, environmental and physical needs of the students through appropriate instructional activities.

Further, the Richardson Study, a national investigation of educational opportunities for able learners, conducted by the Sid W. Richardson Foundation, concludes the following recommendations:

*Ensure that programs are sequential, carefully integrated and articulated throughout the system

*Encourage independence through projects that culminate in real products, and employ the methods of inquiry used by real scholars

RESEARCH cont'd.

*Balance acceleration with enrichment activities for diverse types and degrees of intelligence

According to C. June Maker, the "...distinguishing features common to teaching learning models in curriculum models for the gifted are (a) identified purpose or area of concentration; (b) underlying explicit and implicit assumptions about the characteristics of learning in the teaching-learning process; (c) guidelines for developing specific day to day learning experiences; (d) definite patterns in requirement of learning activities, and (e) research surrounding evaluation of effectiveness.

Of the four families of models of teaching discussed in C. June Maker's Teaching Models in Education Of The Gifted, the Long Branch model most closely resembles that which focuses on the individual's ability to, "...handle information, organize data, sense problems and generate solutions to the problems."

The program established for the intellectually gifted in the Long Branch Schools is, by virtue of the students served, significantly different from our more traditionally developed program because the former must take into account the exceptional intellectual abilities and needs of the students we serve in the program. The learning environment within the program places strong emphasis on a climate which nourishes social interaction; a respect for the rights of others, and an appreciation of life's intellectual pursuits. It is within this climate that the prescribed curriculum becomes the primary guide for effective learning experiences. Maker cites five criteria used in the evaluation of effective curriculum They are: (a) appropriateness, (b) comprehensiveness, (c) flexibility, (d) practicality and (e) validity. It is this last point that has prompted the Long Branch School District to compete for this grant since we believe that while we have an outstanding program, it has never been subjected to a rigorous examination.

In conclusion, the Gifted Education Program K-12 of the Long Branch Public Schools has long served as an informal model for many school districts in Monmouth County, New Jersey. It is also one of the few programs in the area that has maintained a self-contained, full-day component at the elementary level. We believe that our Gifted education model can be readily adapted to any number of school districts throughout the State, be they urban, suburban or rural in nature.

REFERENCES

1. Maker, C. June, Teaching Models in Education Of The Gifted Rockville, Maryland; An Aspen Publication, Aspen Systems Corporation, 1982

2. Soto, Irving S., "Resolving The Critical Curricular Issues Through The C3 Model" - Position Paper distributed at May, 1987 New Jersey Department of Education Second Annual Gifted Conference - no date indicated.

3. Gifted Child Today, January, 1988, Vol. II, No.I-Page 45, "The Richardson Study Concludes"

STAFFING

Each grade has one full-time teacher. Teachers have a minimum of 9 years teaching experience, a master's degree, a demonstrated proficiency in content areas, the ability and willingness to confer with and work with gifted students and their parents, and an ability to communicate well in written and oral form. The teachers are involved in curriculum planning, writing and revision, and participate in training sessions for new academic programs and workshops/conferences on gifted education.

The staff attends monthly team meetings to discuss program concerns and events, and to refine curriculum and program policy. Principals, the District Administrator for Elementary Education, the Assistant Superintendent for Curriculum and Instruction, the District Computer Specialist, and a Middle School representative also attend these articulation meetings. Minutes of all meetings are sent to the Superintendent of Schools.

The six teachers keep parents and the community informed through weekly letters which address curriculum for the week, homework assignments, and upcoming events. A whole program newsletter of student work is compiled four times a year.

STUDENT IDENTIFICATION PROCEDURES

In order to plan and implement an efficient process for identifying gifted students, the word gifted must be clearly defined. The Long Branch School District uses the New Jersey State Department of Education definition:

> Gifted means a pupil who has demonstrated and/or is capable of exceptional performance, accelerated comprehension and assimilation of content, exceptional capacity for abstract, creative and divergent thinking in academic or out-of-school activities and who requires a differentiated educational program beyond that normally provided by the school district.

- CRITERIA FOR KINDERGARTEN -

Long Branch uses multiple identification procedures to identify kindergarten students who are gifted. The identification procedures include the following:

- Howell Pre-Kindergarten Screening Test (Achievement-screening for readiness test)
- Slossen Intelligence Test
- Parent Questionnaire
- Optional recommendations from pre-school teachers and other individuals or agencies having pertinent information

- CRITERIA FOR GRADES 1 - 5 -

The Long Branch district has an ongoing commitment to monitor annually all students for possible inclusion in the program. Class size is limited to 25 students and eligible students are selected from a waiting list each year. Each teacher in the district is asked to review student progress and to recommend eligible students for entrance into the program.

The review includes:

Standardized test scores at the 90 percentile or above in reading and math
Teacher recommendation
Parent recommendation
Report card grade of A average in major subjects

STUDENT EXIT PROCEDURES

In an effort to truly meet the needs of the students in the Long Branch Gifted Program exit procedures have been established for students experiencing difficulty in the program.

The district appreciates the fact that the removal of a child from the program may be disappointing to the child and parents. However, this initial disappointment is minor when weighed against the rising level of frustration and unhappiness caused by not being able to successfully compete with one's peers. In these cases, where the welfare of the child is of paramount concern, exiting the child from the program must be carefully considered. The procedures listed below are applied in all cases where a child is being considered for a return to his/her home base school.

PROCESS

The Exit Procedures are composed of a complete review of the child's academic and social adjustment to the Gifted Program. Included in this review are an examination of the following areas:

Teacher Evaluation
Academic Progress and Class Performance
Achievement Test Scores
Parent Evaluation
Self-Evaluation

A ten page Exit Procedures packet is available upon request.

INSTRUCTIONAL OBJECTIVES

The Long Branch School System seeks to provide its gifted elementary students with a carefully planned program by establishing a framework of educational experiences which are differentiated from those already presented in the regular classroom and offering a variety of subject areas. At the same time, students are encouraged to develop their present interests and achieve the benefits of their innate abilities. The basic goals which are interwoven throughout each curriculum guide are:

- -enhancing cognitive skills
- -developing the higher level thinking processes of application, analysis, synthesis and evaluation
- -engaging the student in self-directed independent work
- -providing an enriched learning environment appropriate to the needs of high potential students
- -providing learning experiences designed to foster personal integrity and feelings of self-worth
- -developing an awareness of the role of the gifted individual within society
- -developing an awareness and appreciation for the resources (human and natural) in our community

INSTRUCTIONAL STRATEGIES

The gifted curriculum is designed to promote the twelve student traits identified as desirable characteristics in the Long Branch Public Schools Model. These traits are:

Leadership
Planning
Communication
Risk taking
Problem solving
Decision-making
Self-sufficiency
Task commitment
Fluency
Acceptance of self and others
Motivation
Curiosity

The program attempts to relate content to broad-based issues and problems (current events, science units, social studies, economics, language arts), to master complex, higher level thinking skills, to develop research skills and methods, and to express learnings in creative ways to different audiences.

The curriculum is both accelerated and enriched. The basic Long Branch curriculum is reviewed for skill mastery at grade level in mathematics, reading and spelling, and accelerated where needed. Enrichment occurs through commercial materials (Jr. Great Books and CSMP math program) and district developed curriculum guides for basic objectives, year long science, economics, computer, creative written communication, and independent study/inquiry process units for each grade level.

The curriculum incorporates various educational strategies to enrich the academic experiences of gifted students. Strategies include:

- -compacting of curriculum through pre-testing and mastery testing to allow for acceleration
- -increased opportunities at each grade level which allow for self-directed learning with accountability through contracts and research projects
- -inquiry teaching addressing real problems
- -discussion and debate techniques stressing intelligent questioning and responding
- -the use of field trips, guest speakers and community resources to reinforce and inspire the learning situation
- -the use of literature, the study of famous people, public speaking, the social studies curriculum and class discussions/projects to develop social competence and leadership
- -questioning techniques and Bloom's Taxonomy exercises which promote the higher thought processes

CURRICULUM PLANNING

In order to effectively plan a differentiated curriculum for our gifted students, four areas of curriculum modification were addressed. These four areas were content, process, product and learning environment.

CONTENT

Content refers to the body of knowledge which is to be presented to the student. The content should relate to broad-based issues and be integrated with multiple disciplines.

Key concepts were isolated in each enrichment subject to facilitate transfer of learning, memory, and understanding of generalizations. Generalizations were made as complex as possible for each grade level. The study of famous/productive people was also included.

PROCESS

Process refers to the method of thinking. Bloom's Taxonomy was used as the teaching/learning model to develop experiences in the higher level thinking skills.

The curriculum was modified to include more concentration at the levels of application, analysis, synthesis and evaluation. Students are offered opportunities to apply knowledge to new situations, develop new ideas and products, and to evaluate the appropriateness of it all. Students are encouraged to think things out for themselves, and to give evidence of their reasoning.

PRODUCT

Product refers to the student efforts in a task or project. Products can take many forms: reports, plays, video-tapes, puppet shows, murals, charts, etc. Students are encouraged to produce products that contain original thought and that are at a level of sophistication equal to their abilities.

LEARNING ENVIRONMENT

Learning environment modification is addressed by establishing an environment that provides challenging tasks, complex ideas, sophisticated methods, and access to library materials. Teacher evaluation of student progress should be a shared experience, incorporating a direction for further learning and an acceptance of the discovery process.

LONG BRANCH GIFTED K - 5 ENRICHMENT COMPONENTS

	SCIENCE	MATH	COMPUTER	CREATIVE WRITTEN COMMUNICATION	ECONOMICS	INDEPENDENT LEARNING SKILLS	READING
K	ANIMALS	CSMP Comprehensive School Math Program	°Computer Awareness °Keyboarding Skills	Role-Playing Storytelling	Gingerbread Factory Pancake Producers Class Carnival Plant Sale	SEE TABLE	ACCELERATION
1	BOTANY	ACCELERATION	°Problem Solving Software °Word Processing °LOGO	LETTERWRITING	Community Planning Barter Village Star Store		
2	ENERGY			Writing Fiction I	Cookie Store Advertising/Marketing Assembly Line Spillover Detectives		JUNIOR GREAT BOOKS
3	ASTRONOMY			Writing Fiction II	Classroom Monetary System People in the Community Celebrity Auction Government in a Community The Economic System		
4	PALEONTOLOGY		BASIC GRAPHICS	Journal Writing in the Affective Area	School Store Market/Command Systems Advertising/Propaganda Economics Terminology City Council Debate		
5	OCEANOGRAPHY			Poetry and Newspaper Journalism	Entrepreneurship Stock Market Game Taxes Creative Competition		NEWSPAPER IN EDUCATION

MAJOR AREAS OF THE CURRICULUM

LANGUAGE ARTS

The basic goal of the language arts program is the development of highly proficient reading and communications skills. The Junior Great Books program enriches the accelerated basal (Economy) reading series by inquiring, through discussion, the interpretation of the author's meaning. Students have many opportunities for expanding their oral and written communication skills via individual and group projects derived from the district developed curriculum.

MATHEMATICS

The district's math program (Macmillan) is used in conjunction with enrichment in the CSMP math program. CSMP develops the mathematical process skills of generalizations, pattern recognition, classification, abstraction, and creative, strategic and critical thinking.

COMPUTER

Computer lessons are sequenced through each grade to promote computer awareness, keyboard familiarity, experiences with a variety of problem-solving software, word processing, and programming in LOGO and BASIC. The ultimate goal, in addition to computer literacy, is to encourage logical and creative thinking through computer experimentation and computer applications.

SCIENCE

COURSE DESCRIPTION

Each grade in the gifted program has a year-long enrichment science curriculum, in addition to the district's developmental science program. Activities and lessons have been planned to provide for maximum student involvement in discussion and application of inquiry skills, observation and prediction of results, use of concepts and terminology, and collection and analysis of data.

THEME

The theme spanning the six grade levels is "Mankind's Interaction With His Environment". Rather than studying the natural world itself, our goal is to allow our students to gain an awareness of the interdependence of man and these natural systems.

KINDERGARTEN - ANIMALS

Kindergarteners are naturally curious about animals so they have many opportunities to explore the animal kingdom. Students will investigate problem situations which harm and endanger animals and pose solutions to these problems. Field trips, speakers, books, videotapes and movies enhance these experiences.

FIRST GRADE - BOTANY

First graders become botanists for the year. Their study includes nature walks, visits to plant related businesses, guest speakers, plant growing in the classroom, investigations of plants as natural resources and the conservation of the plant world.

SECOND GRADE - ENERGY

Second graders study the physical sciences by exploring the topic of energy all year. The complex energy problems that currently challenge our society require that today's youngsters develop into intelligent citizens, able to face difficult choices and make important decisions regarding future sources, supplies, and consumption of energy. One way to help equip children to deal with these important responsibilities is to provide them early in their lives with concrete, direct experiences with several forms of energy. Energy in its largest sense is explored. Students are encouraged to follow their own interests through interest centers, projects, and experiments.

THIRD GRADE - ASTRONOMY

To third graders astronomy represents mankind's quest to understand the unknown. Space exploration epitomizes the characteristics of risk-taking and curiosity. Students develop a historical perspective and an appreciation of their planet's resources and limitations. During the year students become members of the "Young Astronaut's Program", observe the night sky through a powerful telescope, attend

planetarium programs, observe the moon's characteristics over a one month time period, make a model of their solar system, research and report on an area of interest, study the constellations, create an original myth, and share their knowledge as student lecturers.

FOURTH GRADE - PALEONTOLOGY

In order to develop the understanding that a society needs to be responsive to a changing environment, fourth graders study paleontology to become aware of the dynamic characteristics of the earth's history. Students understand that life forms have adapted to a changing environment in order to survive. Students participate in a "Fossil Day" hunt to find 35,000,000 year old shark teeth, research and create models of prehistoric life, and visit museums to prepare to be guest lecturers.

FIFTH GRADE - OCEANOGRAPHY

Oceanography, because it represents a relatively unexplored, challenging scientific frontier, and because of Long Branch's close proximity to the ocean, is a suitable course of study for fifth grade gifted students. By investigating the ocean's untapped resources for food and minerals, students become aware of the need to utilize an open-minded, problem solving approach to harnessing the ocean's potential for alleviating world problems. Students gather materials from the ocean for display and future study, take a boat trip to seine for specimens, have lunch at a seafood restaurant, research ocean organisms, and visit an aquarium.

COMMENTS TO THE TEACHER

It is suggested that one enrichment science lesson be taught per week, in addition to the regular science program.

EVALUATION

Student achievement in this course may be determined by teacher made tests, student products, homework and class participation.

ECONOMICS

RATIONALE

Economics, the study of how society allocates its resources, is a suitable course of study for gifted students. The necessity to wisely choose among the alternative uses of resources will be brought into the lives of the students through the examination of the principles of personal, community, national and global economics.

THEME

The theme of the student as a human resource, a producer as well as a consumer, flows through the six grades.

COURSE DESCRIPTION

Activities are planned at each grade level to have students actually experience operating a business or participating in mini-economies. Key concepts at each grade level are aligned with the district's social studies concepts and are articulated across grade levels.

KINDERGARTENERS learn that they are productive people in society by practicing division of labor and mass production in their Gingerbread Factory. They gain an understanding of organizing and operating a business when they open their Pancake Restaurant for a morning.

FIRST GRADERS learn about productive people in a community by planning a community and taxes, participating in Barter Village, and comparing different communities' economies. They evaluate the qualities of productive people and choose an area of self-improvement.

SECOND GRADERS advance to real money when they operate a cookie store for the entire school. They gain an understanding of supply and demand, profits, and factors that influence sales by practicing advertising techniques and doing a market survey.

THIRD GRADERS set up a classroom monetary system and hold a celebrity auction as they study the economic system and qualities of productive, famous people. They research public and private goods and services in their community and create original projects from their study.

FOURTH GRADERS focus on productivity in the world by organizing and operating a school store, participating in "Market and Command Systems Days" and analyzing advertising and wise consumerism.

FIFTH GRADERS study productivity and entrepreneurship from an historical perspective. They experience the higher level thinking skills when they analyze stock market information in the newspaper, solve the problems of how to invest their money and evaluate their progress weekly in the nationwide "Stock Market Game".

COMMENTS TO THE TEACHER

Approximately one weekly lesson or activity has been planned for the entire school year at each grade level.

EVALUATION

Student achievement in this course may be determined by teacher made tests, projects, homework and class participation.

TEACHING THE INQUIRY PROCESS - INDEPENDENT LEARNING SKILLS

	LIBRARY SKILLS & RESEARCH SOURCES	WRITTEN REPORT FORMAT	ORAL REPORT FORMAT	ORGANIZING & CLASSIFYING PROCESS	STUDENT PRODUCTS	EVALUATION
K	Non-fiction books Picture Books Magazines Advertisements	Cover Picture Sentence Bibliography (Title & Author)	°Three Things I Learned °Visual Aid	-Alphabetizing -Classifying Books -Title Page -Table of Contents -Labeling -Planning a Report	ROLE PLAYING SIMULATION MURAL PLAY PUPPET SHOW LEARNING CENTER TASK CARDS POETRY MODEL GRAPH-CHART SONG SHORT STORY GAME SIGN PAMPHLET REVIEW NEWSPAPER BOOK PHOTO ESSAY COMMUNITY PROJECT WORKSHOP TRANSPARENCIES SLIDE SHOW FILM-VIDEO FILMSTRIP ARTICLE AUDIO-TAPE DEBATE	Teacher and Student
1	Dictionary Non-fiction books Magazines Encyclopedia pictures Maps, Graphs, Tables, Charts	Outline Body Bibliography	°Team Report and individual °Visual Aid	-Organization of Library -Interviewing -Topic Selection -Outlining with Questions		Teacher and Student
2	Encyclopedia Biography Telephone Book Card Catalog Index	Outline Body Bibliography	Team Report and Audio-Visual Aid	-Summarizing -Proofreading -Notetaking -Outlining With Questions		Teacher and Student
3	Dewey Decimal System Atlas Newspaper TV Radio	Entire Bibliography Footnotes	°From Outline Using Notecards °Report Two Items From Each Topic	-Fact and Opinion -Making Inferences -Analogies/Comparisons -Developing a Hypothesis -Drawing Conclusions -Recognize Bias -Conduct Surveys -Cause and Effect		Teacher and Student
4	Almanac Encyclopedia Index Audio-Visual Aids	Entire Bibliography Footnotes	°Summary of Each Main Topic °Use Notecards	-Outlining with Topics -Skimming and Scanning -Relevant and Irrelevant		Teacher and Student
5	Reader's Guide to Periodical Literature N.Y. Times Index Microfilm	Entire Bibliography Footnotes	Same as above or Summary of Entire Outline	Review and refine at a more advanced level		Teacher Student Peer

INQUIRY PROCESS AND INDEPENDENT LEARNING SKILLS RATIONALE

Not all gifted students are self-directed independent learners. They need to practice the skills needed to conduct their own research, direct their own study, and hopefully become life-long learners. They need practical skills to be able to manage their time, sequence activities and identify resources.

COURSE DESCRIPTION

This course of study was planned to assist students in learning to identify their goals and objectives, assess the skills they need to acquire, determine how they will go about their learning and to evaluate their own performance. It provides the teachers in the program with a systematic approach to teaching these necessary skills. The skeletal year-long plans were designed to cover the following areas:

1. Recognizing a variety of investigatory techniques
2. Knowing the reference sources available
3. Knowing why and how the sources are organized
4. Understanding why data is organized
5. Knowing how to select data for organizing
6. Understanding why and how to pull data apart
7. Knowing how to interpret individual findings
8. Understanding how to assess data from a variety of viewpoints
9. Understanding how to assess a variety of interpretations of the same data
10. Writing a report
11. Presenting an oral report
12. Creating original products
13. Evaluating performance

(Adapted from B.S. Atwood, Building Independent Learning Skills)

There are six phases to the inquiry process approach. This process can be continuously developed during the student's life-time. The phases are:

1. Identification of problems to study
2. Collection and organization of known information concerning problems
3. Statement of hypothesis (or question) and possible conclusions
4. Investigation and research to test hypothesis
5. Communication of findings and final product to others
6. Evaluation of total procedure

(Adapted from Stovall and Tongue, Itinerant Resource Teachers for Gifted/Talented)

COMMENTS TO THE TEACHER

The library skills activities are intended to be used in consultation with the media specialist. The classroom teacher will determine when skills are introduced and developed.

CREATIVE COMMUNICATION THROUGH WRITING

GENERAL DESCRIPTION

The Creative Communication Through Writing framework was designed to accompany the existing Long Branch Language and Writing Across the Curriculum guides. Many opportunities for creative writing are already present in the district guides and the students in the gifted program will have further experiences in creative writing with a concentration on specific writing forms at each grade level as follows:

Kindergarten	-	Prewriting readiness through role playing and story telling
Grade One	-	Letterwriting
Grade Two	-	Writing Fiction 1
Grade Three	-	Writing Fiction 2
Grade Four	-	Journal Writing in the Affective Areas
Grade Five	-	Poetry and Newspaper Journalism

GENERAL OBJECTIVES

1. Emphasize the process of composing, giving special emphasis to pre-writing and revising
2. Encourage the students to explore self and peer awareness
3. Develop and enrich student ability to think creatively
4. Establish foundations for mature and technically correct writing
5. Foster an enjoyment of writing and seeing one's writing in print

COMMENTS TO THE TEACHER

This outline and list of resources is intended to assist the teachers in planning for enrichment in written communication skills. These enrichment activities should be introduced after students have mastered the language and writing skills taught at their grade level. Students should be encouraged to submit their writing for publication as often as possible.

E.S. RICHERT. LONG BRANCH EVALUATION

EVALUATION REPORT

SUBMITTED TO: N.J. Department of Education

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Date: June 15, 1989

E.S. RICHERT. LONG BRANCH EVALUATION

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E.S. RICHERT. LONG BRANCH EVALUATION

I. EVALUATION DESIGN

Figure 1, Appendix A, shows the Evaluation Design. It lists the objectives, procedures, timelines and rationales. It should be noted that the evaluation design was developed with a consultant other than the evaluator. The evaluation modifications are listed later in the Recommendations.

II. DATA GATHERED

The chart below indicates the many varied sources of data (teachers, parents, students), the number of respondents on the four objectives designated to be evaluated and the number of the Figures in Appendix A which record the results. Data from these sources address the following student outcomes:

1. Achievement in:
   - A. reading
   - B. math
2. Self-concept
3. Task commitment
4. Higher level thinking:
   - A. critical thinking
   - B. creative thinking

DATA GATHERED ON STUDENT OUTCOMES

STUDENT OUTCOME	1A	1B	2	3	4A	4B
DATA SOURCE:						
Teacher Survey 6 respondents (Fig. 2.)	+	+	+	+	+	+
Parent Survey 136 respondents (Fig. 3.)	+	+	+	+	+	
Student Survey 137 respondents (Fig. 4.)	+	+	+ +	+ +		
Piers-Harris Inventory 40 respondents (Fig. 5.)	+	+	+	+		
Expert's Classroom Observation (Fig. 6.)	+	+	+	+	+	+
Expert's Assessment of Curriculum (Fig. 7.)	+	+	+	+	+	+

The appendices include figures 1-7 samples of the forms that were used to gather the data, and additional anecdotal data from some sources.

Appendix A. FIGURES 1, 2, 3, 4, 5, 6, 7

Appendix B. SAMPLE TEACHER SURVEY

Appendix C. SAMPLE PARENT SURVEY

Appendix D. ANECDOTAL DATA FROM PARENTS

Appendix E. SAMPLE STUDENT SURVEY

Appendix F. ANECDOTAL DATA FROM STUDENTS

Appendix G. SAMPLE OBSERVATION AND CURRICULUM EVALUATION FORM

Appendix H. CRITERIA FOR SAMPLE OBSERVATION AND CURRICULUM EVALUATION FORM

EXPERT OBSERVATIONS OF CLASSES

A 43 item criterion referenced checklist of indicators of curriculum for the gifted was used by the evaluator to record observations of activities in the classroom that address the curriculum's four outcomes. (See Appendix G and H). All but one of the classes were observed. In addition, teachers were questioned about certain aspects of the curriculum that were not readily observable.

EXPERT ASSESSMENT OF CURRICULUM GUIDES

A 43 item criterion referenced checklist that records observations of indicators of the curriculum's four outcomes was used by the evaluator. (See Appendix G and H). Each of the curriculum guides were evaluated.

III. ANALYSIS OF THE DATA

1. ALL PARTICIPANTS IN THE PROGRAM ARE HIGHLY SATISFIED

All the quantitative data from students, parents and teachers indicate a very high degree of satisfaction with the program. In addition, there is a great deal of anecdotal data (see Appendices) in the form of answers by students and parents to open-ended questions that demonstrate support for the program. 93% of the parents want the program to continue. No parent wants the program to be stopped and only 7% (10 parents) indicate they want the program to continue, but suggest personal reservation. Parents, in particular at certain grade levels, cite the quality of teaching. At specific grade levels, parents cite emotional support provided by teachers, and the challenging work.

2. **ALL FOUR OUTCOMES ARE DEMONSTRATED**

The data from the many different sources (students, teachers, parents, outside expert) clearly indicates that all the four outcomes are being achieved, although not to the same extent. There are also some differences across the various grade levels. As Figures 2, 3, and 4 indicate, data from parents, teachers, and students confirm that all the four outcomes are being accomplished. (The objectives are discussed individually below). The average score, with 3 being the highest possible score, for all of the objectives is consistently above 2.5, which is very positive. The average score of all teachers for all the objectives was 2.56; for parents, 2.62; for students (who only assessed 2 and 3), 2.75.

As Figure 6 suggests, the expert's assessment of the classroom materials and in classroom observations, the curriculum as it is being implemented in classes certainly does address the four desired outcomes, but not equally well, nor the same at all grade levels. The expert's assessment of the curriculum guides (Figure 7) indicates that the written curriculum certainly addresses the four desired outcomes, but not to the same degree.

3. **COGNITIVE DEVELOPMENT IS STRENGTH OF THE CURRICULUM: ACADEMIC ACCELERATION AND ACHIEVEMENT; AND HIGH LEVEL THINKING SKILLS (Outcomes 1 and 4)**

The curriculum's strongest components address Outcome 1 (achievement in reading and in math), as well as Outcome 4 (higher level thinking skills). Because the district's testing service made errors in analyzing district data, the achievement of students in the program could not be compared with that of all students in the district this year.

This omission in data collection is not a serious one for a gifted program for the following two reasons.

A. Pre and post assessment using grade level achievement test data is rarely very relevant for measuring student growth, since this kind of achievement is not the highest priority in gifted programs.

B. Because of the district's identification procedure, students entered the program with high scores. This can create two statistical artifacts that will underestimate growth of gifted students in basic skills areas. One, such tests have a low ceiling, and the test does not have enough items to measure growth of high achievers. Therefore, as a group, students will not seem to have progressed a great deal.

Two, (again, because the test does not have enough items to measure growth of high achievers) post-testing is likely to demonstrate a regression toward the mean, or a lowering of the average scores of gifted students.

Nevertheless, data from parents and teachers clearly indicates significant growth in the reading and math skills as well as in more complex content. Teachers and parents consistently rated progress in skills most highly.

The subjective assessments from teachers and parents are amply confirmed by the objective analysis of the curriculum guides and the classroom observations by the evaluator. The materials, content, skills, and activities in the curriculum guides and in the classrooms are consistently above grade level, and in several cases several years above grade level. The curriculum fosters acceleration not just in skills, but also in content, by offering more complex materials, concepts, activities, and projects that require application of skills above grade level. There is no doubt that students in the program demonstrate outstanding growth in not only reading and math, but in oral and written verbal communication, as well as in complex content in social studies and science. For example, kindergarten students are writing very competently; first graders are analyzing and evaluating complex information about various uses of masks in different cultures. All students are offered reading materials several years above grade level. Through field trips, students are given direct access to higher level information than they could possibly get in an elementary classroom.

Critical and creative thinking seem to be major strengths of the curriculum. Data from the teacher and parent surveys indicate that students are improving, especially in critical thinking. Data from the expert's analysis of the written curriculum and classroom observations indicate that both critical and creative thinking are incorporated into the curriculum consistently.

In addition, acceleration, and therefore incorporation of higher level thinking, is accomplished in other ways, including the following:

A. Use of texts 1-2 years above grade level

B. Intensive study of complex interdisciplinary science concepts allows more advanced content, concepts, and terminology to be acquired and explored. The science curriculum is also more advanced because it includes more experimentation and direct observation than most elementary science curricula.

C. Economics units provide high level math and social studies concepts to be introduced and applied using topics such as the stock market, operating a business, banking, taxes, and economic systems.

D. Students are 1-3 years above grade level in work/study skills, organizational skills, library and investigatory skills, and interpreting data.

E. Products are more advanced and sophisticated than would be expected at each grade level. The quality and the complexity of the students' products that were observed by the evaluator are the most concrete demonstration of development of creative thinking that could be asked for.

F. Computers are introduced at least 1-2 years earlier, and software such as LOGO, graphics, word-processing, and problem solving is introduced several grades earlier than usual.

4. SELF CONCEPT

Not surprisingly, data about improvement of self-concept is a little less clear than about the cognitive objectives. There are good reasons for the relative ambiguity. The Piers-Harris pre-post assessment data may be problematic for at least the six following reasons.

A. Measuring affective growth is always difficult.

B. The Piers-Harris was not normed for gifted students, so we cannot be certain that it has any validity for this population. There is some question as to whether the self-concept of the gifted differ from the norm. Some of the subtests, such as Popularity, may be less valid for the gifted than for a heterogeneous population.

C. In addition, the conceptualization of the Piers-Harris Scale does not incorporate Maslow's view that the self-esteem of self-actualizing individual's (people who fully develop their emotional potential) is independent of external evaluation. Therefore students who are most advanced may not get the highest scores.

D. There is no control group against which to match the data.

E. Students' pre-tests indicate that they started with high scores and there may not be enough items to measure growth of students entering with high scores.

F. Students at different grade levels have been in the program varying numbers of years. Growth in one year may not accurately indicate the extent of development of a positive self-concept.

Figure 5 indicates the average growth across all the tests, across all levels of students and both grades did not show any pattern of improvement. Nevertheless, the Scale did measure improvement in different subtests for some of the students. When the variables of (1) level of self-esteem, (2) grade and (3) subtest are separated, some specific patterns emerge that indicate the strengths and some of the possible weaknesses of the curriculum in developing self-esteem.

There are differences among students who were above average, average and below average in self-esteem. Students at both grade levels who were above average in self esteem (based on scores on the Piers-Harris) consistently improved in each of the subtests and for the total battery. The students who improved represent over 80% of the students in grades 4 and 5, so their improvement is significant. There are many fewer students in the average (5-20% or 1-5 students) and below average groups (0-5% or 0-1 student), so their results may very well be far less valid. Across the grade levels, above average students, therefore over 80%, consistently improved at both grade levels and in all the subtests. Therefore the student outcome of improving self-concept is being demonstrated by student progress on the Piers-Harris.

If the different subtest scores are compared, greatest improvement in both grades was made by students above average in self-esteem in "Behavior" (average gain of 18.5 points) and "Intellectual/School Status" (average gain of 12.5 points). The two subtests in which there was the least gain at both grade levels were "Physical attributes" and "Popularity." That the latter showed little change may be due to the fact that physical appearance does not change significantly in one year. Little change in "popularity" may be accounted for by little change in social relationships during a single year.

There are also differences between the two grade levels. In grade 4, the greatest and most significant gains were made by students above average in self-esteem, in this order, "Intellectual/school status" (gain of 25 points), "Anxiety" (gain of 9), "Happiness" and "Behavior" (both gain of 8). In grade 5, the greatest and most significant gains were made by students above average in self-esteem in "Behavior" (gain of 29 points), "Anxiety" (gain of 13) and "Happiness" (gain of 8).

The only possibly disturbing data is that the very few (1-5 per grade level) students who enter the program with average or below average self-esteem do not improve or may even do worse. This suggests that these few students require some individual attention. It is possible students with average or low self-esteem get lower post-test scores because they may compare themselves unfavorably with the students with high self-esteem and find themselves falling short.

Parents, teachers and students rated the development of self-concept and task commitment positively. Students, who assessed only self-concept and task commitment, rated both very highly at 2.76 and 2.73. But development of self-concept did get the lowest (of some very high scores) average scores of 2.47 (from parents) and 2.66 (from teachers). Only 48% of parents said that their child "increased considerably" (a score of 3) his or her understanding of his/her strengths and potentialities; and only 55% said that their child's self-concept improved "greatly". Most parents did indicate that their children's self-esteem and understanding did improve at least somewhat (a score of 2). Parents's perception of limited improvement of self-esteem may be related to the children entering the program with positive self-esteem, but it is unlikely to be related to limited progress in children's understanding of themselves. Yet anecdotal data from students in response to an explicit question as to what they learned about themselves indicate that students at each grade level did learn specific information about their capabilities.

Data from parents, teachers and students indicate that there is no problem with the development of task commitment. However, the scores for the questions related to this objective are generally not as high as for the other objectives. Quantitative and anecdotal data from parents and students suggest that perhaps more choices in topics, activities or projects might be helpful.

While the data from all the sources (Piers-Harris, parents, teachers, students) indicate that most students' self-esteem is improving, the affective areas of the curriculum probably require more direct emphasis. The evaluator's assessment of the curriculum guides indicated that not enough time is devoted to addressing explicitly the improvement of self-esteem and fostering peer relationships. Discussions with teachers elicited unequivocal commitment to students' needs. Classroom observations indicated that almost all teachers are very student-centered and caring, but may not be explicitly addressing affective areas as part of the content. The differences across the grade levels that were observed seemed to be based on differences in teaching styles, or personal priorities of teachers.

5. NO MAJOR PROBLEMS REVEALED

The data do not reveal any major programmatic or curricular problems. If special emotional support is given to students with average or below average self-esteem, then any potential individual emotional problem can be averted. Any individual problems cited in the anecdotal data seem associated with an individual teacher's personal problems, which in any school district are unavoidable, and which are totally unrelated to the quality of the curriculum or the program as designed.

The comparatively low scores given to resources (question 6 on parent evaluation) and to field trips (questions 13 on parent evaluation) are the result of facilites and bussing problems that are beyond the budget and scope of the gifted program's control.

IV. RECOMMENDATIONS

The program unquestionably meets its objectives. What follows as recommendations are not intended as criticism of any shortcomings. The recommendations are suggestions for strengthening an already excellent program for students with gifted potential, or modifications that might be made by other districts wanting to use the model.

1. Cognitive development (reading, math, higher level thinking skills)

The curriculum units and other program materials are excellent. They should continue to be used because they are so effective in promoting cognitive development, both in areas of basic skills and in higher level content and thinking, both critical and creative.

Inclusion of evaluation, particularly self-evaluation of progress and products could make the curriculum even stronger. Creative thinking could also be strengthened by including orginality or risk-taking as evaluation criteria for products and projects, as well as grades.

Acceleration is a major strength of the curriculum. However, it is important to be realistic as to what primary children, because of their limited experience and skills, can actually produce. Trying to do a "research report" on the kindergarten level is unrealistic, and may give students a distorted idea of what research actually entails. Some products and research could probably have better results if at least the first experiences were small group endeavors.

2. Positive self-concept; socialization

Development of a positive self-concept, which includes self-acceptance, should be explicitly infused into the content of the curriculum, particularly into language arts through the occasional use of journals, into reading by using effective questions in response to reading and into various evaluation forms used by students for their products. (See Richert, Holistic Approaches to Writing and Literature).

Teachers might benefit from some training in the indicators of high level emotional and ethical development (see Maslow, Frankl, Fromm, Jung, Richert) and strategies for nurturing that in the classroom.

Socialization, while not an explicit outcome to be evaluated, (except indirectly on the Piers-Harris Scale as part of self-esteem) is a crucial component of programs for the gifted. Socialization, learning to understand and accept each other, as well as themselves, should be a daily part of the content for students with gifted potential. At least twice daily, small group peer learning activities with different individuals for different purposes (projects, review of materials, starting homework, editing each other's work, etc.) should be instituted. This will also foster improvement of self-concept that might be measurable by the Piers-Harris Inventory.

While most of the teachers are very open and accepting, both creativity and a healthy self-concept could be strengthened even more by the teachers as a group stressing the importance of an open, accepting, non-judgmental atmosphere that reinforces individual differences in styles, preferences, even handwriting, rather than conformity to teacher expectations.

3. **Task Commitment**

Students clearly show task commitment, but a distinction should be made in the curriculum and by teachers between intrinsically motivated task commitment (based on student interests) and extrinsically motivated task commitment (based on teacher assignments or grades). The former is necessary for the development of gifted potential. Most students entering the program have the latter.

Students at each grade level should be surveyed to find out their interests, and the curriculum should be expanded (it already is very interdisciplinary) to include students' individual interests at each grade level. For example, for homework and projects, "other" should always be a possible option.

4. **Evaluation Design**

The data collected on student progress is more than adequate to demonstrate achievement of the four outcomes selected. However, the order of priority of the outcomes should be reversed. In a gifted program, progress in higher level thinking skills, self-esteem and socialization are much more important than progress in basic skills. Measuring progress in task commitment should be based primarily on assessing the degree to which tasks or projects are self initiated. (See III. 3 above). If progress in reading and math or critical thinking are major concerns, then additional data could be collected through the use of a critical thinking test or the use of above grade level achievement tests. For measuring progress in creativity, pre and post assessment of products is the most reliable method.

5. **Identification Procedures**

The evaluation was not designed to assess the program's identification procedure. But since the program's materials may be disseminated to other districts, who may copy all aspects of the program, it is suggested that the N.J. Guide for Identification for Gifted Programs (Richert) be referred to in order to ensure equity in identification of economically or socially disadvantaged students.

FIGURE I

GIFTED PROGRAM (K - 5) EVALUATION DESIGN

OUTCOMES	PROCEDURE	INSTRUMENT	TIMELINES	RATIONALE
I. Program participants will demonstrate high achievement growth rates in reading & math	A)Teacher completes rating scale on student growth in reading & math	Locally developed teacher rating scale	Pre-test in reading & math 9/88 Checklist completed 5/89 Analysis of results 5/89	A)To assess the rate of growth in reading & math
	B)Expert in curriculum for the gifted will evaluate level of instruction or written curriculum guides	Use of criterion referenced checklist which includes level of instruction	May 1989	B)To have an objective expert assess the degree to which the curriculum addressed uses higher level reading materials & requires higher level math skills
	C)Expert in curriculum for the gifted will observe level of instruction in classes	Use of criterion referenced checklist which includes level of instruction	May 1989	C)To have an objective expert make direct observations of the degree to which the classroom uses higher level reading materials and requires higher level math skills
Program participants will demonstrate high achievement growth rates in reading & math as viewed by their parents	Administer parent survey questions 1, 2, 3, 4	Locally developed parent survey	Administer survey 5/89	To examine parent evaluation of growth in reading & math

2. As a result of our program, the students will improve their self-image	A)Administer pre & post test to 4th & 5th graders. Compare & analyze pre & post test scores	Piers-Harris Self-Concept Inventory	Pre-Test 9/88 Post-Test 5/89 Analysis 6/89	To assess the improvement of self-concept among program participants
	B)Teacher observes students' self-concepts throughout the year & completes checklist	Teacher rating scale (locally developed)	9/88-5/89	Teacher assessment of self-concepts of program participants
	C)Expert in curriculum for the gifted will evaluate written curriculum guides		May 1989	C)To have an objective expert assess the degree to which the written curriculum includes strategies for improving self-concept
	D)Expert in curriculum for the gifted will observe classes	Use of criterion referenced checklist which includes indicators for fostering positive self-image	May 1989	D)To have an objective expert make direct observations of the degree to which classroom activities foster a positive self-image

3. Program participants will demonstrate growth in level of task commitment	A)Teacher observes class & completes checklist on student behavior for all students in program	Locally developed checklist which measures task completion & enthusiasm for school	Pre - 9/88 Post - 6/89	A)To assess task commitment & enthusiasm for learning
	B)Expert in curriculum for the gifted will evaluate written curriculum guides and will observe classes	Use of criterion referenced checklist which includes indicators for fostering task commitment	May 1989	B)To have an objective expert assess the degree to which the written curriculum includes strategies for developing task commitment & make direct observations of the degree to which students in the classroom demonstrate task commitment
4. Program participants will demonstrate growth in the higher level critical and creative thinking skills	A)Expert in curriculum for gifted will evaluate written curriculum guides and will observe classes	Use of criterion referenced checklist which includes indicators of higher level thinking skills	May 1989	A)To have an objective expert assess the degree to which the written curriculum includes higher level thinking skills & make direct observations of the degree to which the classroom demonstrates higher level thinking skills
	B)Teachers will observe higher level thinking skills in the Fall and again in the Spring	B)Locally developed teacher rating scale questions 3 & 4	B)Observe skills in Fall 1989 - Complete rating scale Spring 1989	B)To have teachers assess growth in the higher level thinking skills
	C)Parents will complete survey question #13	C)Locally developed parent survey question #13	C)May 1989	C)To have parents assess growth in the higher level thinking skills

FIG. 2. Teacher Survey

Grade	K	1	2	3	4	5	Av.	OUT	COME				
								IA	IB	II	III	IVA	IVB
Quest								read	math	self	task	crit	creat
1	2.90	3.00	2.75	3.00	2.80	2.80	**2.88**	2.72	2.88	2.57	2.50	2.31	2.44
2	2.90	2.80	2.63	2.96	2.00	3.00	**2.72**						
3	2.80	2.30	2.00	2.12	2.04	2.60	**2.31**						
4	2.70	2.30	2.33	2.56	2.24	2.50	**2.44**						
5	2.86	2.39	2.33	2.72	2.42	2.40	**2.52**						
6	2.68	2.39	2.21	2.76	2.50	2.30	**2.47**						
7	2.60	2.50	2.50	2.76	2.18	2.70	**2.54**						
8	2.68	2.40	2.75	2.68	2.48	2.60	**2.60**						
Av.	**2.77**	**2.51**	**2.44**	**2.70**	**2.33**	**2.61**	2.56						

FIG. 3. Parent Survey

Grade	K	1	2	3	4	5	Av.	OUTCOME						
								I	IA	IB	II	III	IVA	IVB
Question									read	math	self	task	crit	creat
1	3.00	2.80	2.50	2.65	2.60	2.41	**2.66**		2.66	2.68	2.47	2.66	2.70	
2	2.90	2.90	2.68	2.69	2.44	2.45	**2.68**							
3	2.80	2.90	2.45	2.25	2.68	2.58	**2.61**							
4	2.80	3.00	2.63	2.79	2.80	2.75	**2.80**							
5	2.70	2.69	2.30	2.41	2.60	2.25	**2.49**							
6	2.60	2.40	2.10	2.41	2.64	2.16	**2.39**							
7	2.77	2.65	2.54	2.29	2.80	2.08	**2.52**							
8	2.77	2.69	2.40	2.37	2.60	2.04	**2.48**							
9	2.50	2.50	2.30	2.37	2.56	2.25	**2.41**							
10	2.80	2.69	2.30	2.83	2.72	2.45	**2.63**							
11	2.90	2.80	2.80	2.79	2.92	2.75	**2.85**							
12	3.00	2.90	2.90	2.83	3.00	2.87	**2.92**							
13	2.88	2.50	2.20	2.95	2.80	2.87	**2.70**							
Total Av.	**2.80**	**2.72**	**2.47**	**2.59**	**2.70**	**2.45**	2.62							

FIG. 4. Student Survey

Score	3	2	1				Av.	OUT COME				
K-5								I	IA	IB	II	III
Quest. #	%	%	%						read	math	self	task
1	74.80	26.20					2.77				2.73	2.76
2	74.60	19.90	5.00				2.69					
3	81.30	18.70					2.81					
4	66.10	29.60	4.30				2.62					
5	88.80	7.10	4.10				2.85					
Tot. Av.	77.12	20.30	2.68	0.00	0.00	0.00	2.75					

FIG. 5. Piers Harris

	Grade 4			Grade 5			Average 4 to 5		
	Pre	Post	Diff.	Pre	Post	Diff.	Pre	Post	Diff.
Total									
Abv. Av.	71.0	84.0	**13.0**	75.0	75.0	**0.0**	73.0	79.5	**6.5**
Av.	25.0	12.0	**-13.0**	25.0	25.0	**0.0**	25.0	18.5	**-6.5**
Bel. Av.	4.0	4.0	**0.0**	0.0	0.0	**0.0**	2.0	2.0	**0.0**
Behavior									
AB Av.	71.0	79.0	**8.0**	67.0	96.0	**29.0**	69.0	87.5	**18.5**
Av.	29.0	21.0	**-8.0**	33.0	4.0	**29.0**	31.0	12.5	**-18.5**
Bel. Av.	0.0	0.0	**0.0**	0.0	0.0	**-29.0**	0.0	0.0	**0.0**
Intell/Sch									
Abv. Av.	58.0	83.0	**25.0**	71.0	71.0	**0.0**	64.5	77.0	**12.5**
Av.	37.0	17.0	**-20.0**	25.0	25.0	**0.0**	31.0	21.0	**-10.0**
Bel. Av.	5.0	0.0	**-5.0**	4.0	4.0	**0.0**	4.5	2.0	**-2.5**
Phys. Attr									
Abv. Av.	71.0	71.0	**0.0**	71.0	71.0	**0.0**	71.0	71.0	**0.0**
Av.	21.0	16.0	**-5.0**	21.0	29.0	**8.0**	21.0	22.5	**1.5**
Bel. Av.	8.0	13.0	**5.0**	8.0	13.0	**5.0**	8.0	13.0	**5.0**
Anxiety									
Abv. Av.	58.0	67.0	**9.0**	58.0	71.0	**13.0**	58.0	69.0	**11.0**
Av.	25.0	25.0	**0.0**	29.0	13.0	**-16.0**	27.0	19.0	**-8.0**
Bel. Av.	12.0	8.0	**-4.0**	13.0	16.0	**3.0**	12.5	12.0	**-0.5**
Popularity									
Abv. Av.	63.0	67.0	**4.0**	63.0	61.0	**-2.0**	63.0	64.0	**1.0**
Av.	25.0	25.0	**0.0**	25.0	25.0	**0.0**	25.0	25.0	**0.0**
Bel. Av.	12.0	8.0	**-4.0**	12.0	8.0	**-4.0**	12.0	8.0	**-4.0**
Happiness									
Abv. Av.	63.0	71.0	**8.0**	63.0	71.0	**8.0**	63.0	71.0	**8.0**
Av.	25.0	16.0	**-9.0**	25.0	16.0	**-9.0**	25.0	16.0	**-9.0**
Bel. Av.	12.0	13.0	**1.0**	12.0	13.0	**1.0**	12.0	13.0	**1.0**

EXPERT'S CLASSROOM OBSERVATIONS

	1A. Read Achievement	1B. Math Achievement	2. Self-Concept	3. Task Commitment	4A. Critical Thinking	4B. Creative Thinking		REICH	THIEL	LOMASKY	COLAGUORI	LE BEAU		
							COGNITIVE							
	✓	✓					1. Content Level		✓	✓	✓	✓		
	✓	✓					2. Rate	✓	✓	✓	✓	✓		
	✓	✓		✓			3. Interdisciplinary	✓	✓	✓	✓	✓		
	✓	✓					4. Beyond Class	✓	✓	✓	✓	✓		
			✓				5. Materials Choice			✓	✓			
			✓				6. Resources	✓		✓	✓	✓		
							7. Inc. affect	✓	✓	✓				
	✓	✓					8. Skills in context	✓	✓	✓	✓	✓		
					✓		9. Critical thinking	✓	✓	✓		✓		
					✓		10. Application		✓	✓	✓	✓		
					✓		11. Analysis	✓	✓		✓	✓		
					✓		12. Evaluation	✓	✓					
					✓		13. Knowledge of objects	✓						
					✓		14. Knowl of criteria for eval							
						✓	15. Creative thinking	✓	✓	✓	✓			
							16. Choices of content	✓		✓	✓			
						✓	17. Media	✓		✓	✓			
						✓	18. Product	✓		✓	✓			
				✓		✓	19. Assignments	✓						
						✓	20. Time							
		✓					21. Products	✓	✓	✓	✓	✓		
							AFFECTIVE/ETHICAL							
			✓	✓			22. Self-concept	✓	✓					
		✓					23. Peer-relations							
							24. Cooperation	✓	✓	✓				
			✓				25. Decisionmaking							
			✓	✓			26. Independence	✓						
			✓	✓			27. Grouping: individual	✓	✓	✓	✓	✓		
			✓	✓			28. Small group							
			✓				29. Mentors							
							EVALUATION							
			✓			✓	30. Individual progress							
	✓		✓			✓	31. Self-evaluation							
	✓		✓			✓	32. Process							
	✓		✓			✓	33. Peer/edit							
	✓		✓			✓	34. Flexible in time							
	✓		✓			✓	35. Flexible in mode							
	✓		✓			✓	36. Quantitative							
	✓		✓			✓	37. Qualitative							
							ATHOSPHERE							
							38. Student-centered							
					✓		39. Open, accepting	✓	✓					
					✓		40. Non-pressured	✓	✓					
	✓	✓					41. Other pre-test	✓	✓	✓	✓	✓		
						✓	42. R-brain	✓	✓	✓	✓	✓		
		✓					43. Journal		✓					

EXPERT'S ASSESSMENT OF CURRICULUM

1A. Read Achievement	1B. Math Achievement	2. Self-Concept	3. Task Commitment	4A. Critical Thinking	4B. Creative Thinking		K. ANIMALS	1. BOTANY	2. ENERGY	3. ASTRONOMY	4. PALENTOLGY	5. OCEANOGRAPHY
						COGNITIVE						
✓	✓					1. Content Level	✓	✓	✓	✓		
✓	✓					2. Rate	✓	✓	✓	✓	✓	✓
✓	✓		✓			3. Interdisciplinary	✓	✓	✓	✓	✓	✓
✓	✓					4. Beyond Class	✓	✓	✓	✓	✓	✓
		✓				5. Materials Choice		✓	✓	✓	✓	✓
		✓				6. Resources	✓	✓	✓	✓	✓	✓
						7. Inc. affect	✓	✓				
✓	✓					8. Skills in context	✓	✓	✓	✓	✓	✓
				✓		9. Critical thinking		✓	✓	✓	✓	✓
				✓		10. Application	✓	✓	✓	✓	✓	✓
				✓		11. Analysis	✓	✓	✓	✓		
				✓		12. Evaluation	✓	✓	✓	✓	✓	✓
				✓		13. Knowledge of objects	✓	✓				
				✓		14. Knowl of criteria for eval						
					✓	15. Creative thinking	✓	✓	✓	✓	✓	✓
						16. Choices of content	✓					
					✓	17. Media						
					✓	18. Product				✓		
			✓		✓	19. Assignments				✓		
					✓	20. Time						
	✓					21. Products	✓					
						AFFECTIVE/ETHICAL						
		✓	✓			22. Self-concept						
	✓					23. Peer-relations						
		✓				24. Cooperation						
		✓	✓			25. Decisionmaking						
		✓	✓			26. Independence						
		✓	✓			27. Grouping: individual						
		✓				28. Small group						
		✓				29. Mentors						
						EVALUATION						
		✓			✓	30. Individual progress	✓	✓	✓	✓	✓	✓
✓		✓			✓	31. Self-evaluation						
✓		✓			✓	32. Process						
✓		✓			✓	33. Peer/edit						
✓		✓			✓	34. Flexible in time						
✓		✓			✓	35. Flexible in mode						
✓		✓			✓	36. Quantitative	✓	✓	✓	✓	✓	✓
✓		✓			✓	37. Qualitative						
						ATMOSPHERE						
						38. Student-centered	✓					
				✓		39. Open, accepting						
				✓		40. Non-pressured						
✓	✓					41. Other pre-test						
					✓	42. R-brain						
						43. Journal						

LONG BRANCH GIFTED PROGRAM
TEACHER'S RATING SCALE FOR STUDENT GROWTH

TEACHER _____ D A T E / / / / _____ STUDENT'S NAME

1. Academic achievement in math (use academic growth chart).

1	2	3
Did Not Improve	Improved Somewhat	Improved A Great Deal

2. Academic achievement in reading.

1	2	3
Did Not Improve	Improved Somewhat	Improved A Great Deal

3. Critical thinking skills (use research reports and Bloom's Learning Centers).

1	2	3
Not A Critical Thinker	Fairly Critical Thinker	High Level Critical Thinker

4. Creativity of products and projects.

1	2	3
Little Creativity, Originality	Occasionally Creative	Highly Creative

5. Works independently on self-selected tasks (teacher observation).

1	2	3
Never	Frequently	Always

6. Pursues personal interests (Class Interest Chart).

1	2	3
Never	Somewhat	A Great Deal

7. Positive self-image (teacher observation).

1	2	3
Poor	Somewhat Positive	Very Positive

8. Understands his/her strengths - weaknesses.

1	2	3
Not at All	Somewhat	A Great Deal

APPENDIX C

LONG BRANCH PUBLIC SCHOOLS
LONG BRANCH, NEW JERSEY

GIFTED PROGRAM PARENT EVALUATION

CHILD'S SCHOOL_____GRADE_____Male_____Female_____

Please circle the one most appropriate numeral for each statement.

1. Child's demonstration of skills and understanding in the area of mathematics.

1	2	3
no change	increased somewhat	increased considerably

2. Child' demonstration of skills and understanding in the area of reading.

1	2	3
no change	increased somewhat	increased considerably

3. Child's demonstration of skills and understanding in the area of oral and written communication.

1	2	3
no change	increased somewhat	increased considerably

4. Has you child learned new information or skills?

1	2	3
minimally	to a fair extent	greatly

5. Does your child work on his/her interests at home?

1	2	3
less than before	the same	more than before

6. Are facilities and material provided for independent study and problem solving?

1	2	3
minimally	to a fair extent	greatly

7. On the whole, would you say that the Gifted Program has been beneficial to your child socially?

1	2	3
minimally	to a fair extent	greatly

GIFTED PROGRAM PARENT EVALUATION
PAGE 2

8. On the whole, would you say that while attending the Gifted Program your child's self-concept has improved?

1	2	3
minimally	to a fair extent	greatly

9. Has your child gained a better understanding of his/her own strengths and potentialities?

1	2	3
no change	increased somewhat	increased considerably

10. As a parent of a child in this year's class, has ample opportunity been given to you to be involved and to participate?

1	2	3
no opportunity	some opportunity	great deal of opportunity

11. Would you enroll other children of yours and/or recommend the program to others?

1	2	3
definitely not	with reservation	absolutely

12. Would you like to see the program continue?

1	2	3
defintiely not	with reservation	absolutely

13. Are trips, projects and special activities planned to broaden and challenge your child?

1	2	3
minimally	to a fair extent	greatly

COMMENTS ABOUT THE PROGRAM ARE WELCOME:

Signature (optional)_____

Please return this form to your child's teacher in a sealed envelope.

APPENDIX D

ANECDOTAL DATA FROM PARENTS

KINDERGARTEN:

"The teachers are doing a wonderful job!"

GRADE ONE:

"There's an environment of love in which to grow intellectually and emotionally."
"Teacher great and energetic and enthusiastic."
"Program, curriculum and activities provide challenges."

GRADE TWO:

Negative reactions/comments due to overwhelming problems with teacher absenteeism and an odor problem within classroom making students ill. Program comments were not made.

GRADE THREE:

Very few written comments
Pleased with progress

GRADE FOUR:

"Challenging program."
"Great program and curriculum."
"Relaxed atmosphere."
"Teacher respects individual differences."

GRADE FIVE:

"Great teachers."
"Great program."
"Challenging program." (some felt too demanding of student's time)
"Program beneficial."

LONG BRANCH PUBLIC SCHOOLS
LONG BRANCH, NEW JERSEY
GIFTED PROGRAM
STUDENT SURVEY

DATE_____ GRADE_____

	YES	SOMETIMES	NO
1. Were you interested in the subjects you were taught in the Gifted Program?			
2. Did you do any activities this year that "sparked" your interest to learn more on your own?			
3. Did you have choices in your projects and activities?			
4. Did you talk about or share what you learned with others?			
5. Did you learn about your strengths and weaknesses?			
6. Are you able to manage the amount of homework?			

7. Name 3 things that you enjoyed participating in this year:

A._____

B._____

C._____

8. What, if anything, would you change in the Gifted Program?_____

_____

9. What do you like about the Gifted Program?_____

_____

10. What is the most important thing you learned this year?_____

_____

11. What did you learn about yourself?_____

_____

ANECDOTAL DATA FROM STUDENTS

9. WHAT DO YOU LIKE ABOUT THE GIFTED PROGRAM?

KINDERGARTEN:

"I like learning."
"I like math."
"I like reading."

GRADE ONE:

"I like the projects I get to do."
"I like the computer."
"I like everything!"
"I like the way we get our brain thinking."

GRADE TWO:

"I like everything."
"I like the teachers."

GRADE THREE:

"I like the projects."
"I like the activities we do."
"I like the higher level work."
"Makes you feel good about yourself."

GRADE FOUR:

"I like the field trips."
"I like the curriculum and projects."
"I like the teachers."

GRADE FIVE:

"Curriculum and activities and projects."
"It's challenging."
"Makes you feel good about yourself."

10. WHAT IS THE MOST IMPORTANT THING YOU LEARNED THIS YEAR?

KINDERGARTEN:

"I learned math."
"I learned reading."

GRADE ONE:

"I learned about people different from me - handicapped - African."
"Learn as much as you can."

GRADE TWO:

"I learned many things."
"I learned math and spelling."

GRADE THREE:

"Handling a lot of work myself."
"How to work cooperatively in groups."
"Project Long Branch."

GRADE FOUR:

"Egypt and dinosaurs."
"How to be a good friend."
"To trust myself and be my age."
"To cooperate."

ANECDOTAL DATA FROM STUDENTS cont'd.

GRADE FIVE:

"To believe in myself and work hard to succeed."
"To work better with others."
"I learned about myself."

11. WHAT DID YOU LEARN ABOUT YOURSELF?

KINDERGARTEN:

"I learned to be nice."
"I learned to help."
"I learned to be my own self."

GRADE ONE:

"I can write good stories."
"I'm a good worker."
"If you try, you can do anything."
"I learned I can read louder." (overcame shyness)
"I'm nice and a good sport."

GRADE TWO:

"I can do well if I try."
"To share more with my classmates."
"I'm good at things I wasn't good at."
"Not to be a quitter."

GRADE THREE:

"People like me."
"I'm a good student."
"Not to be too hard on myself."
"I have responsibilities."
"I'm lucky to be me."

GRADE FOUR:

"I can be a good sport."
"I can have more friends."
"I learned to be a better friend."
"I learned my strengths and weaknesses."
"I learned to be honest."

GRADE FIVE:

"I can accomplish anything if I put my mind to it."
"My strengths and weaknesses."
"To be less shy."
"To believe in myself."
"I'm intelligent!"

APPENDIX G

SAMPLE OBSERVATION AND CURRICULUM EVALUATION FORM

COGNITIVE
Content---level_____
rate_____
interdisciplinary_____
beyond class_____
materials choice_____
resources_____
inc. affect_____
Skills in context_____
Critical thinking
analysis_____
evaluation_____
knowledge of obj._____
knowledge of criteria for eval_____
Creative thinking
choices of content_____
media_____
product_____
assignments_____
time_____
AFFECTIVE/ETHICAL
Self-concept_____
Peer-relations_____
Cooperation_____
Decisionmaking_____
Independence_____
Grouping: individual_____
sm. gp._____
mentors_____
EVALUATION
ind. progress_____
self-eval_____
process_____
peer/edit_____
flexible in time_____
flexible in mode_____
quantitative_____
qualitative_____
ATMOSPHERE
student-centered_____
Open, accepting_____
Non-pressured_____
OTHER pre-test_____
R-brain_____

APPENDIX H

CRITERIA for a curriculum to maximize the potential of the gifted, 1985, Susanne Richert

In order to conduct a qualitative evaluation it is necessary to determine the specific criteria that are relevant for a gifted program.

Based on research and publications on various cognitive and affective taxonomies, the evaluator developed the attached Observation Form. Explanations of the criteria on the Form are as follows. (Evaluator's article on Holistic Curriculum in her attached Curriculum Handbook includes further elaboration of these objectives.)

A. COGNITIVE

1. Content

- level

  The level of the materials/texts used should not only be on a higher grade level, but at the highest level that individual students can handle.

- rate

  Students need to proceed through the subject matter as fast as they can individually, not just as a group.

- interdisciplinary

  An interdisciplinary approach is essential to incorporate students' interests and galvanize their highest level abilities.

- beyond classroom resources

  Resources, both human and material, beyond the classroom need to be available so students' can develop their highest potential.

- choice of texts and materials

  *All students should not be reading the same texts or materials; especially in English.

  *In order to achieve the first four objectives listed above, choices of materials, reading and texts are essential. Students need choices in as many of the following as possible:

-content of assignments,
-media in which assignments are to be expressed,
-the form of the product to be handed in,
-among various assignments,
-deadlines for assignments.

*Choices in these areas are important for these cognitive, affective and social reasons:

-students learn decision-making and responsibility by being given choices, not by being denied options;
-the highest levels of abilities can be evoked only if they are related to student interests and strengths in content, medium, and learning style;
-there is not individualization going on - students are just working alone - if all students have the same assignments. Even if there is "homogeneous" grouping, especially at the highest levels of ability where there is actually an immense range of abilities and interests, a much greater range than within a designated homogeneously grouped "average" or "regular" class;
-choices are essential to foster creativity, originality and decision-making.

-resources for research or experiments

Libraries and/or labs must be available so students can do research

2. Skills taught in context, as means, not end

Skills instruction, especially in English, should incorporate research on the most effective teaching methods. Research from Johns Hopkins and elsewhere (NCTE study on the most effective methods of teaching writing), indicate that:

-the most effective way to teach skills is in context, through direct application, as part of the writing process.

-in teaching writing, grammar, etc. should be taught at the editing stage, after students have written, not before;

-peers as audience, and for editing and evaluation are crucial;

-students should know and use specific criteria for evaluating their own work and that of their peers.

3. Critical thinking

In various cognitive taxonomies, these are the highest levels of critical thinking and should be emphasized if a course is to be designated for gifted students:

-analysis

-evaluation

-knowledge of objectives

-knowledge of criteria for evaluation

4. Creative thinking

-In all cognitive and affective taxonomies, synthesis or creative thinking are the highest cognitive abilities.

-Original products, rather than just reporduction of others' thoughts or regurgitation of facts is the best demonstration of creativity.

-Creative thinking or originality needs to be taught and valued through teacher statements or evaluation criteria.

B. AFFECTIVE/social/ethical

1. Self-Concept

Development of a realistic self-concept is crucial, not only for mental health, but also for the fulfillment of the highest levels of cognitive potential. Very able or potentially gifted students need to understand both their potential, so they can achieve it, and their limitations, so they are not hampered by unrealistic or distorted expectations.

2. Peer Relations, Small group work and Cooperation

-Students need opportunities to work on social and peer relationships. This is a very critical developmental task.

-In addition, cooperation in small group work and projects should be emphasized.

-Students should have the opportunity to have older students or resource people as mentors.

3. Decision-making and Independence

-Decision-making needs to be both taught and encouraged by offering students choices among assignments not just conforming to specific teacher expectations.

-True individualization and independence require that a distinction be made between working alone and having choices and making decisions alone. The latter two are necessary for the development of intellectual, emotional, and ethical maturity. (See Maslow, Fromm, Frankl, Jung, Richert and others.)

C. EVALUATION

-Students should not be penalized by grades because of their placement in an advanced class. It is inequitable for students to get a B for work that would have given them an A in a regular class. They should not be penalized if they attempt more difficult or creative work.

-Individual rather than just comparative or competititve progress in specific skills or subject should be emphasized.

-Qualitative (as opposed to purely quantitative) evaluation, specifying criteria that deal with high level cognitive skills (analysis, evaluation and creativity, etc) should be used by students and teachers in the evaluation of progress and products.

-Students should be involved in self-evaluation, ie. evaluating their own work based on specific criteria.

-Peer editing and peer review are excellent techniques to use.

-Evaluation should allow for flexibility in deadlines when students attempt more ambitious or creative projects.

D. ATMOSPHERE

-The classroom needs to be student rather than just teacher-centered (see section on choices and decisions in cognitive and affective sections).

-Openness and flexibility are essential for students to take the risk of more difficult or creative work, rather than just following the text or teacher instructions.

E. OTHER CRITERIA

-Pre and post-testing is very helpful for individualizing acceleration and fostering small group work and instruction in skills.

-To develop students abilities to the maximum and to prepare them for a future world which Naisbett (in Megatrends) and others predict will be more "right-brained", the curriculum should foster spatial, kinesthetic, and affective as well as crative abilities. (See Richert "Toward the Tao of Giftedness (1986)."